

606149

ACCOUNTS AND PAPERS:

THIRTY-FIVE VOLUMES.

—(6.)—

NAVY ESTIMATES.

N A V Y.

Session

19 *November* 1867 — 31 *July* 1868.

VOL. XLV.

1867-8.



ACCOUNTS AND PAPERS:

1867-8.

THIRTY-FIVE VOLUMES:—CONTENTS OF THE

SIXTH VOLUME.

N.B.—*THE* Figures at the beginning of the line, correspond with the N^o at the foot of each Paper; and the Figures at the end of the line, refer to the MS. Paging of the Volumes arranged for The House of Commons.

NAVY ESTIMATES:

74. Navy Estimates for the Year 1868-69, with Appendix; and Account of Naval Old Store Moneys and Extra Receipts in 1866-67 - - - - - p. 1

Greenwich Hospital:

75. Estimate for Greenwich Hospital and School, for the Year 1868-69 - - - 183

Excess of Expenditure, 1866-67:

143. Statement of Excess of Expenditure for Her Majesty's Navy, for the Year 1866-67 - - - - - 191

Receipt and Expenditure:

85. Appropriation Account of the Moneys expended for Navy Services, in the Year ended 31st March 1867; with the Report of the Comptroller and Auditor General thereon - - - - - 193

Savings and Deficiencies upon Grants:

84. Savings and Deficiencies upon the Grants for Navy Services, in the Year ended 31st March 1867; showing all Cases in which the Navy Department has obtained the Sanction of the Treasury to Expenditure not provided for in the Grants for that Year, together with Copies of the Representations made to the Treasury by the Board of Admiralty; also the Balance Sheet, showing the Ledger Balances on 30th September 1867 - - - - - 209

Votes on Account:

149. Estimate of the Sum required to be Voted on Account for Navy Services, for the Year ending 31st March 1869 - - - - - 299

NAVY, GENERALLY:

Beef:

353. Number of Tierces of Beef Cured, Average Cost per Tierce of 304 Pounds, at Her Majesty's Victualling Yard, Deptford, for supplying the Navy, for the last Five Years; and Average Price obtained for Old Beef Sold:—And, Number of Pounds of Preserved Boiled Beef prepared at the Royal Victoria Yard, Deptford, per Annum during the last Three Years, and the Average Cost Price of the same per Pound, &c. - - - - - 301

Channel Fleet:

- ✓ 128. Report of Admiral Warden of the Trials of the Channel Fleet in 1867, and Remarks of Vice Admiral Robinson, Controller of the Navy, thereon - p. 303
- ✓ 128-I. Admiral Warden's Report of the Trials of the Channel Fleet in 1867, and Remarks of Vice Admiral Robinson, Controller of the Navy - - - - 387
- ✓ 500. Report from Rear Admiral Warden, dated the 11th July 1868, enclosing Letters from Rear Admiral Ryder, and commanding Officers of Ships in the Channel Fleet - - - - - 399

Coating of Ships:

- ✓ 470. Cost each Year during the last Five Years for Composition for Coating the bottoms of Iron or other Ships of Her Majesty's Navy; Rate paid for the same:— Number of Ships Coated; Names of the Firms or Companies who supplied the Composition, &c. - - - - - 611

Designs for Ships:

- ✓ 26. Circular Letter of 15th May 1867, sent by the Admiralty to several Ship-building Firms, inviting Competitive Plans for Building either a Turret or a Broadside Ship, with the Reports of the Comptroller and Chief Constructor thereon:—And, Number of Designs of each Class sent in, and the subsequent Reply of the Admiralty to each Firm, conveying their Decision thereon - 613

Distribution of Forces:

- ✓ 167. Number of Her Majesty's Ships and Vessels on the different Stations on 1st March of each Year from 1847 to 1867, both inclusive, and their Total Complements of Seamen, Boys, and Marines; and also Number of Marines Ashore for each Year during the same Period - - - - - 637

Dockyards:

- ✓ 166. Additional Papers with regard to the Progress of Shipbuilding, &c. in Her Majesty's Dockyards for the Years 1868-69, &c.:—General Summary showing the Appropriation of Vote 6:—Programme of Dockyard Works, showing the Estimated Expenditure for Wages and Materials upon the Hulls of Ships Building - - - - - 641
- ✓ 394. Copy of Memoranda by Lieutenant Colonel Clarke, R.E., Director of Works (Explanatory of Vote 11) - - - - - 657

Dockyards and Factories:

- ✓ 314. Sum Voted for Wages in Her Majesty's Dockyards and Factories at Home, for the Year 1867-8; Actual Expenditure within the Year, and Source from which the Excess of Expenditure over Estimate was drawn; Number of Shipwrights and Labourers for whom Provision was made in the Estimates of 1867-8, Actual Number at each of the Dockyards and Factories at Home at the commencement of each Month in the same Year and the present Financial Year, and Number to which it is proposed to Reduce them - - - - - 663

First Class Boys, &c.:

- ✓ 23. Number of First Class Boys, Second Class Boys, *bonâ fide* Seamen, Coast Guard Fleet Men, &c., who were Borne, Rated, Entered, or who Left the Service during the Years 1865-66 and 1866-67 (in continuation of Paper, No. 134 of Session 1866) - - - - - 667
- ✓ 474. Return showing the Number of First Class Boys, Second Class Boys, *bonâ fide* Seamen, Coast Guard Fleet Men, &c., who were Borne, Rated, Entered, or who Left the Service during the Years 1867-68 (in continuation of Paper, No. 23 of the present Session) - - - - - 669

Greenwich Hospital:

- ✓ 187. Accounts of the Receipt and Expenditure of the Capital and of the Income derived from the Lands and Property held for the Benefit of Greenwich Hospital, 1865-66 - - - - - 671
- ✓ 475. Income Account, Capital Account, and Accounts of the Receipt and Expenditure of the Capital and of the Income derived from the Lands and Property held for the Benefit of Greenwich Hospital, 1866-67 - - - - - 691

Iron Plated Ships and Batteries :

473. Iron Plated Ships and Batteries Built, Building, or Ordered to be Built (in continuation of Paper, No. 565 of Session 1867) - - - - p. 707

Naval Reserve :

218. Number of Men now Enrolled in the Royal Naval Reserve; distinguishing the Forts, &c. at which they are Enrolled, and the whole Number Drilled during the Year 1867 (in continuation of Paper, No. 386 of Session 1867) - 713
238. Number of Seamen of the Royal Naval Reserve, and the Expenditure incurred on their account, for the Years 1865-6, 1866-7, 1867-8, 1868-9 - - 717
282. Report by Captain Gardner, of his Inspection of the Royal Naval Reserve during February and March 1868 :—And, Report of Rear Admiral Tarleton to the Admiralty on the Returns and Reports from Drill Ships of Naval Reserve Men Drilled during the Year 1867 - - - - - 719

Naval Savings Banks :

444. Account of Deposits in Naval Savings Banks, and the Payments thereof, and of Interest thereon; of all Investments under "The Naval Savings Bank Act, 1866"; and the Application of the Interest or Dividends accruing in respect thereof; and of the Proceeds of any Sale of any Stocks, Annuities, or Securities, during the Financial Year 1866-67 - - - - - 729

Prize Money, &c. :

418. An Account showing the Receipt and Expenditure of Naval Prize, Bounty, Salvage, and other Moneys, between the 1st April 1867 and the 31st March 1868 - - - - - 731

Transports :

471. Cost, Tonnage, Power, and Consumption of Coal of the Transports "Serapis," "Malabar," "Crocodile," "Jumna," and "Euphrates"; also, the Expense of conducting the service in conveying the Indian Reliefs, to and from India, during the past Season - - - - - 743

Turret Ships :

501. Opinions of Naval Officers upon the Merits, or otherwise, of the Turret Ship as a Sea-going Ship - - - - - 753

Vessels not Armour-Plated :

472. Vessels not Armour-Plated, Building, or ordered to be Built, during the Year 1868 - - - - - 765

The "Warrior," &c. :

283. Controller's Report on the Three Trials lately concluded of the "Warrior," "Minotaur," and "Bellerophon" - - - - - 773
336. Reports of the Officers conducting the Trials of Speeds of the "Warrior," "Minotaur," and "Bellerophon," referred to in the Report of the Controller of 11th May 1868 - - - - - 779

NAVY ESTIMATES,

FOR

THE YEAR

1868-69,

WITH APPENDIX.



[ACCOUNT of NAVAL OLD STORE MONEYS and EXTRA RECEIPTS in 1866-67.]

(PRESENTED TO PARLIAMENT BY COMMAND OF HER MAJESTY.)

*Ordered, by The House of Commons, to be Printed,
17 February 1868.*

TABLE OF CONTENTS.

	PAGE
Statement showing the Net Cost of the Services provided for in the Navy Estimates for the Years 1866-67, 1867-68, and 1868-69 - - - - -	3
Abstract of the Sums required for 1868-69, showing the Increase or Decrease as compared with the Sums Voted in 1867-68 - - - - -	4 and 5
Votes for the Effective Service, Nos. 1 to 14 - - - - -	6 to 116
Ditto Non-Effective Service, Nos. 15 and 16 - - - - -	117 to 133
Vote for the Army Department (Conveyance of Troops), No. 17 - - - - -	134 and 135
Recapitulation of the Estimates - - - - -	136

APPENDIX.

No. 1.—Statement showing in Detail the Pay and Allowances of Flag Officers and their Retinues; of Officers Superintending Dockyards, &c.; and of Commissioned and other Officers, Petty Officers, Seamen, and Boys - - - - -	referred to at p. 7 - Vote 1	138 to 149
No. 2.—Statement of Special Pay and Allowances to Officers and others for the particular Services specified - - - - -	referred to at p. 8 - „ 1	150 to 154
No. 3.—Statement showing the Number of Officers, Men, and Boys, More or Less Borne than Voted - - - - -	- - - - -	155
No. 3.—Statement of the Number of Cadets admitted in 1867 - - - - -	- - - - -	155
No. 4.—Comparative statement of the Number of Ships and Vessels in Commission on 1st December 1866 and 1st December 1867 - - - - -	- - - - -	155
No. 5.—Statement explanatory of the Expense of 14,900 Marines, provided for under Vote No. 1 - - - - -	referred to at p. 9 - Vote 1	156 to 158
No. 6.—Statement of the Expenditure in 1866-67 on account of Marine Contingencies and Allowances - - - - -	„ p. 9 - „ 1	159
No. 7.—Statement of the whole Charge on account of the Corps of Royal Marines, included under the several Votes of the Estimates - - - - -	„ p. 9 - „ 1	159
No. 8.—Statement showing the Appropriation of the Messengers, &c. in the Departments of the Principal Officers, &c. - - - - -	„ p. 17 - „ 3	160
No. 9.—Statement of the Expenditure for Rewards, &c., for Scientific Purposes, in the Year 1866-67 - - - - -	„ p. 25 - „ 5	161
No. 10.—Statement of the Rates of Surveying Pay and Lodging Money of Surveying Officers, provided for in the Estimates - - - - -	„ p. 27 - „ 5	161
No. 11.—Statement of the Coast and other Surveys in progress at Home and Abroad - - - - -	„ p. 27 - „ 5	161
No. 12.—Statement of the Number of Steam Ships Afloat and Building, and of the Number of Effective Sailing Ships - - - - -	„ p. 60 - „ 6	162
No. 13.—Programme of Shipbuilding Works to be undertaken in Her Majesty's Dockyards during the year 1868-69 - - - - -	„ p. 60 - „ 6	163 to 172
No. 14.—Statement of the Number and Description of Workmen authorised as the Establishments at the several Dockyards at Home - - - - -	„ p. 60 - „ 6	173
No. 15.—Statement of the Distribution of hired Artificers, Labourers, &c. in the several Dockyards at Home - - - - -	„ p. 60 - „ 6	173
No. 16.—Statement of the Number and Description of Workmen estimated for in the Steam Factories at Home - - - - -	„ p. 60 - „ 6	174
No. 17.—Statement of the Numbers and Description of Workmen authorised as the Establishments at the several Victualling Yards at Home - - - - -	„ p. 74 - „ 7	174
No. 18.—Detailed Statement of the Sums required for Works under 500 l. each, taken under Vote No. 11, New Works, &c. - - - - -	„ p. 98 to 109 „ 11	175 and 176
No. 19.—Detailed Statement of the Sums required for Repairs and Maintenance of Buildings - - - - -	„ p. 98 to 109 „ 11	177
No. 20.—Statement of Pay of Persons temporarily employed on Engineering and Architectural Works and Repairs, provided for under Vote No. 11 - - - - -	„ p. 109 - „ 11	178
No. 21.—Statement of the Expenditure in the year 1866-67 for Miscellaneous Payments and Allowances - - - - -	„ p. 116 - „ 14	179

STATEMENT showing the NET COST of the SERVICES provided for in the NAVY ESTIMATES for the Financial Years 1866-67, 1867-68, and 1868-69, after taking into Account the EXTRA RECEIPTS of the NAVAL DEPARTMENT payable into the EXCHEQUER.

(Prefixed to the NAVY ESTIMATES in accordance with Treasury Minute of 12th December 1863.)

1866-67 :		£.	s.	d.
Navy Estimates 1866-67	- - - - -	10,434,735	-	-
Add,—				
Excess of Deficiencies over Surpluses on the ordinary Grants (Deficiencies, 317,534 <i>l.</i> 14 <i>s.</i> 10 <i>d.</i> ; Surpluses, 226,915 <i>l.</i> 1 <i>s.</i> 1 <i>d.</i>)		90,619	13	9
Expenditure, as per Final Account for 1866-67		10,525,354	13	9
Abate,—				
Extra Receipts and Repayments, as per Statement shown at page 180 of these Estimates (1st April 1866 to 31st March 1867)		184,539	19	7
Net Amount of Expenditure for Naval Services for the Year 1866-67, after deducting Extra Receipts and Repayments paid to the Exchequer		£.	10,340,814	14 2
1867-68 :				
Navy Estimates 1867-68	- - - - -	10,976,253	-	-
Extra Receipts and Repayments :		£.	s.	d.
1st April to 31st December 1867		297,645	16	5
Quarter, from 1st January to 31st March 1868 (Estimated)		88,048	-	-
		385,693	16	5
Net Amount, after deducting Estimated Extra Receipts and Repayments paid, or to be paid, to the Exchequer		£.	10,590,559	3 7
1868-69 :				
Navy Estimates 1868-69	- - - - -	11,177,290	-	-
Estimated Amount of Naval Old Store Moneys and Extra Receipts to be paid to the Exchequer, viz. :				
Ordinary Extra Receipts and Repayments		£.	s.	d.
240,000		240,000	-	-
Estimated Value of Supplies to other Depart- ments of Government, as shown in note on page 5		203,292	-	-
		443,292	-	-
Net Amount, after deducting Estimated Extra Receipts, and Repayments to be paid to the Exchequer		£.	10,733,998	- -

Admiralty, }
13 February 1868.]

J. BEEBY,
Accountant General of the Navy.

ESTIMATE of the Sums required to meet the Expenses which may be
Increase and Decrease, as compared with the Sums Voted

Number of Vote.	Page.	A B S T R A C T.									
1	6	WAGES to Seamen and Marines	-	-	-	-	-	-	-	-	-
2	10	VICTUALS and CLOTHING for ditto	-	-	-	-	-	-	-	-	-
3	13	ADMIRALTY OFFICE	-	-	-	-	-	-	-	-	-
4	18	COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, and ROYAL NAVAL RESERVE	-	-	-	-	-	-	-	-	-
5	23	SCIENTIFIC BRANCH	-	-	-	-	-	-	-	-	-
6	29	DOCKYARDS and NAVAL YARDS AT HOME and ABROAD	-	-	-	-	-	-	-	-	-
7	62	VICTUALLING YARDS and TRANSPORT ESTABLISHMENTS AT HOME and ABROAD	-	-	-	-	-	-	-	-	-
8	76	MEDICAL ESTABLISHMENTS AT HOME and ABROAD	-	-	-	-	-	-	-	-	-
9	88	MARINE DIVISIONS	-	-	-	-	-	-	-	-	-
10 Sec. I.	94	NAVAL STORES for the Building, Repair, and Outfit of the Fleet and Coast Guard, Steam Machinery and Ships built by Contract:									
Sec. II.		Section I. Storekeeper General of the Navy	-	-	-	-	-	-	-	-	-
		Section II. Controller of the Navy	-	-	-	-	-	-	-	-	-
11	97	NEW WORKS, Buildings, Machinery, and Repairs	-	-	-	-	-	-	-	-	-
12	111	MEDICINES and Medical Stores	-	-	-	-	-	-	-	-	-
13	112	MARTIAL LAW and LAW CHARGES	-	-	-	-	-	-	-	-	-
14	114	MISCELLANEOUS SERVICES	-	-	-	-	-	-	-	-	-
TOTAL for the EFFECTIVE SERVICE - - - £.											
15	117	HALF PAY, Reserved Half Pay, and Retired Pay to Officers of the Navy and Royal Marines	-	-	-	-	-	-	-	-	-
16 Sec. I.	122	MILITARY and CIVIL PENSIONS and ALLOWANCES:									
Sec. II.		Section I. Military Pensions and Allowances	-	-	-	-	-	-	-	-	-
		Section II. Civil Pensions and Allowances	-	-	-	-	-	-	-	-	-
TOTAL FOR THE NAVAL SERVICE - - - £.											
FOR THE SERVICE OF OTHER DEPARTMENTS OF GOVERNMENT:											
17	134	ARMY DEPARTMENT (Conveyance of Troops)	-	-	-	-	-	-	-	-	-
GRAND TOTAL - - - £.											

* This sum includes the Vote in the Supplementary Estimate for the additional charge on account of the increased pay to be given to the non-commissioned officers and privates of the Royal Marine Corps, amounting to 50,000 *l.* (See Parliamentary Paper, 22nd July 1867, No. 465.)

Memorandum.—Provision was made for the undermentioned Services in the Navy Estimates for 1867–68, on account of which no corresponding Sums have been taken in those for the ensuing Financial Year; the Lords of the Treasury having directed that the same should be transferred to the Estimates for the Post Office Department, and for Civil Services respectively.

Under Vote No. 1.—WAGES to SEAMEN, &c.:

Expenses connected with the Packet Establishments at Dover, Liverpool, and Southampton	£.
	1,305

Under Vote No. 11.—NEW WORKS, &c.:

Expenses in connection with building and repairing Coast Guard Stations in Ireland	£.
	11,500

Less,—Amount taken in Vote No. 5, Scientific Branch, for 1868–69, under Items of “Royal Observatory,” and “Magnetic and Meteorological Department,” provision for which was included in 1867–68, in the Estimates for Civil Services

£.	1,070
	11,795

By deducting this sum from the last Vote for 1867–68, the total amount to be compared with 1868–69 is £. 10,964,518.

incurred in the NAVAL DEPARTMENT in the Year 1868-69, showing the for the preceding Year, under the following Heads; viz.

REQUIRED to be Voted for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.	1868/69.		Number of Vote.
		Increase.	Decrease.	
£.	£.	£.	£.	
3,036,634	2,950,952 *	85,682	- - - -	1
1,335,842	1,241,614	94,228	- - - -	2
182,364	176,018	6,346	- - - -	3
263,926	267,067	- - - -	3,141	4
63,565	65,106	- - - -	1,541	5
1,223,562	1,375,368	- - - -	151,806	6
87,179	86,395	784	- - - -	7
64,824	62,686	2,138	- - - -	8
20,709	17,448	3,261	- - - -	9
892,908	855,511	37,397	- - - -	10
1,092,500	860,559	231,941	- - - -	Sec. I.
814,237	888,588	- - - -	74,351	Sec. II.
78,164	80,664	- - - -	2,500	11
20,365	21,332	- - - -	967	12
175,800	168,450	7,350	- - - -	13
9,352,579	9,117,758	469,127	234,306	14
700,166	704,937	- - - -	4,771	15
550,447	528,667	21,780	- - - -	16
223,498	218,915	4,583	- - - -	Sec. I.
				Sec. II
10,826,690	10,570,277	495,490	239,077	
350,600	405,976	- - - -	55,376	17
11,177,290	10,976,253	495,490	294,453	

NET INCREASE - - - £. 201,037.

Note.—In accordance with directions contained in Treasury Minute of the 2nd November 1867, the undermentioned Votes for the Year 1868-69, include the Estimated Value of Supplies to other Departments of Government, &c., which will be paid into the Exchequer instead of being appropriated, as hitherto, as Credits in aid of these Votes, viz. :—

					£.
Vote 1.	{ Seamen	- - -	£. 14,972	- - -	p. 8 } 15,582
	{ Marines	- - -	610	- - -	p. 9 }
" 2.	{ Provisions	- - -	84,977	- - -	p. 11 } 90,500
	{ Clothing	- - -	5,523	- - -	p. 12 }
" 10, Sect. 1.—	Naval Stores, &c.	- - -	- - -	- - -	p. 95 } 6,000
" 17.—	Army Department	- - -	- - -	- - -	p. 135 } 91,210
					£. 203,292

Admiralty,
13 February 1868. }

H. CORRY.

C. DU CANE.

VOTE 1.

WAGES, &c., TO SEAMEN AND MARINES.

I. ESTIMATE of the Sum which will be required in the Year ending on the 31st March 1869, to defray the EXPENSE of WAGES, &c., to SEAMEN and MARINES.

Three Million and Thirty-six Thousand Six Hundred and Thirty-four Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—WAGES OF AND ALLOW- ANCES TO SEAMEN AND MARINES <i>AFLOAT</i> (Minus the Sums deducted at end of Estimate) - - -	SEAMEN - - - - - £. 2,509,209 MARINES { WAGES, &c. - - - 210,621 { GOOD-CONDUCT PAY 8,338			
	2,728,168	2,689,820 and 24,400 Supp. Estimate.	113,948	—
B.—EXPENSE OF RAISING MEN, AND BOUNTY TO SEAMEN - - -	1,700	600	1,100	—
C.—SUBSISTENCE OF COMMISSIONED AND STAFF OFFICERS, ROYAL MARINES, <i>ON SHORE</i> - - -	80,971	67,113	13,858	—
D.—SUBSISTENCE OF NON-COMMIS- SIONED OFFICERS AND PRIVATES, ROYAL MARINES, <i>ON SHORE</i> - - -	WAGES - - - £. 152,329 GOOD-CONDUCT PAY 8,112 BEER-MONEY, &c. - 22,743			
	183,184	202,336 and 25,600 Supp. Estimate.	- -	44,752
E.—PRIZES TO ROYAL MARINES FOR GOOD SHOOTING - - -	1,163	783	380	—
F.—RECRUITING EXPENSES, ROYAL MARINES - - -	15,448	17,300	- -	1,852
G.—COLONIAL PAY AND FIELD ALLOWANCES TO MARINES, SAN JUAN -	4,000	2,000	2,000	—
H.—CONTINGENCIES, MARINE SERVICE - - -	22,000	21,000	1,000	—
£.	3,036,634	2,950,952 Including Supp. Estimate.	132,286	46,604

NET INCREASE - - - £. 85,682.

Vote 1.—WAGES, &c., to SEAMEN and MARINES,—continued.

III. DETAILS of the foregoing.

Number Voted last Year.	Number for 1868/69.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		WAGES, &c., TO SEAMEN.		
		FLEET—SERVICE AFLOAT :		
		To defray the Charge of Wages (including Established Allowances) which shall come in course of payment in the year ending on the 31st March 1869, for the following Officers and Seamen to be employed in Her Majesty's Fleet, and other Services ; viz. :—	£. s. d.	£. s. d.
190	195	For Flag Officers in Commission, and their Retinues, One Hundred and Ninety-five in number	49,778 - -	49,517 - -
57	58	For Officers superintending Her Majesty's Dockyards and Naval Establishments, and their Retinues, Fifty-eight in number	12,729 - -	12,672 - -
3,542	3,478	For Three Thousand Four Hundred and Seventy-eight Commissioned and other Officers, above the rank of Subordinate Officers, to be employed in Her Majesty's Fleet (including 9,500 £. for extension of Full Pay for limited periods to Officers on their return from Service on Foreign Stations)	779,391 - -	764,546 - -
772	736	For Seven Hundred and Thirty-six Subordinate Officers	31,823 - -	33,387 - -
1,153	1,093	For One Thousand and Ninety-three Warrant Officers	114,757 - -	119,310 - -
31,301	30,140	For Thirty Thousand One Hundred and Forty Petty Officers and Seamen	1,004,545 - -	1,011,430 - -
37,915	35,700		£. 1,993,023 - -	1,990,862 - -
		Boys :		
		For Seven Thousand Four Hundred Boys, to be employed as follows ; viz. :—		
7,418	7,400	{ 4,300 on Service in the Fleet - - - - - 3,100 under Instruction in Training Ships - - - - - }	74,219 - -	74,528 - -
44,433	43,100	(For Details of the above, see "Explanatory Statement (A. 1)," APPENDIX, No. 1, page 138.)	£. 2,067,242 - -	2,065,390 - -
		COAST GUARD SERVICE :		
7,250	7,700	For Three Thousand Two Hundred Officers, Seamen and Boys (360 No.), to be employed in Her Majesty's Coast Guard Service <i>Afloat</i> - - - - -	No. 3,200 155,985 - -	142,988 - -
		For Four Thousand Five Hundred Officers and Men, to be employed in Her Majesty's Coast Guard Service <i>on Shore</i> - - - - -	4,500 210,653 - -	197,923 - -
			7,700	
		(Also <i>Civilians</i> , provided for at page 20.) - - -	350	
		TOTAL for COAST GUARD SERVICE - - -	8,050	
		(For Details of the above, see "Explanatory Statement (A. 1)," APPENDIX, No. 1, page 138.)		
51,683	50,800	Carried forward - - -	£. 2,433,830 - -	2,406,301 - -

Vote 1.—WAGES, &c., to SEAMEN and MARINES—*continued.*

Number Voted last Year.	Number for 1868/69.	WAGES, &c., TO SEAMEN— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68
				£. s. d.	£. s. d.
51,683	50,800	Brought forward - - -		2,433,880 - -	2,406,301 - -
		TROOP SHIPS for INDIAN SERVICE, OVERLAND ROUTE.			
		For One Thousand Two Hundred and Seventy Officers, Seamen, and Boys (5 No.) to be employed in Troop Ships (five in number) for Indian Service, as follows, viz. :—			
1,229	1,270	* In the two Ships on the European side of the Isthmus of Suez - - - - -	No. 472	£. 24,954	
		* In the three Ships on the Indian side of ditto - - - - -	798	37,342	
		TOTAL for INDIAN TROOP SHIPS - - -	1,270	62,296 - -	59,089 - -
52,912	52,070	TOTAL OF ALL SERVICES - - - £.		2,496,176 - -	2,465,390 - -
		(For Details of the above, see "Explanatory Statement (A. 1)," APPENDIX, No. 1, page 138.)			
		To provide for Special Pay and Allowances to Officers and other Persons to be employed on particular Services - - - - -		20,304 - -	20,351 - -
		(For Details of "Special Pay, &c.," see "Explanatory Statement (A. 2)," APPENDIX, No. 2, page 150.)			
		To provide for Good Conduct Pay to Petty Officers and Seamen, after certain periods of Service; and for Gratuities to Petty Officers and Seamen, Non-commissioned Officers and Privates of Royal Marines, for distinguished Gallantry in Action; also, for Gratuities in aid of an Outfit to Petty Officers, who may be promoted to be Warrant Officers - - - - -		42,800 - -	41,500 - -
		B.—To provide for raising Men and Boys for the Fleet - - - - -		1,700 - -	600 - -
52,912	52,070	TOTAL WAGES, &c., to SEAMEN in FLEET, COAST GUARD SERVICE, and INDIAN TROOP SHIPS - £.		2,560,980 - -	2,527,841 - -
		Deduct.—The following Sums for the Services, and for the reasons specified, which are included in the foregoing Estimate, as the Officers and Men to whom they appertain are borne on Ships' books, <i>as belonging to the Navy</i> , and are comprised in the Total Number to be voted for the Fleet, &c., viz. :—			
		The Pay and Allowances of Officers superintending Her Majesty's Dockyards and Naval Establishments, and their Retinues; provision for the same being made in the Estimate for Dockyards, &c. (Vote 6, page 29), as part of the Cost of those Establishments - - - - -	£. 12,729		
		*The Pay and Allowances of the Officers and Crews (except Marines) of the three Troop Ships for Indian Service (Overland Route) on the Indian side of the Isthmus of Suez,—as the same will be defrayed by the Indian Government - - -	37,342	50,071 - -	127,216 -
				<i>Vide Note † on next page.</i>	
		NET TOTAL WAGES, &c., to SEAMEN { A.—WAGES, &c. - £. 2,509,209 } in FLEET and COAST GUARD SERVICE - - - - - { B.—RAISING MEN, &c. - 1,700 } - £.	2,510,909 - -	2,400,625 - -	
		(For Details of the foregoing Estimate, see "Explanatory Statement (A. 1 & 2)," APPENDIX, Nos. 1 and 2, pages 138 and 150.)			

* Last year (1867–68) upon the supposition that the whole expense for Pay, &c., of the Officers and Crews of the five Troop Ships for Indian Service would be borne by the Indian Government, the full amount was deducted at the end of the Estimate for Vote 1. This year (1868–69), however, it will be defrayed as follows, viz. :—The expense of the two ships on the European side of the Isthmus of Suez (£. 24,954) will be divided between the Imperial and the Indian Governments, in the proportions of two-fifths to the former (in consideration of such ships being available for the Imperial Service for a portion of the year), and three-fifths to the latter. The Indian proportion (viz., £. 14,972) is provided for along with the Imperial proportion in the present Estimate, as all payments on account thereof will be made out of Imperial Funds, and be charged to this Vote; but the same will be claimed by the Admiralty from the Indian Government, and the amount, when recovered, will be paid into the Imperial Exchequer, and shown in the account of Extra Naval Receipts (at page 180), in accordance with the directions of the Lords of the Treasury. With regard to the three ships on the Indian side of the Isthmus, the whole expense will be borne by the Indian Government, and all payments on account thereof will be made out of Indian Funds. The amount, therefore, for these three ships (£. 37,342) is deducted at the end of this Estimate. The reason for showing it above, is because the Officers and Men to whom it appertains are borne on ships' books as *belonging to the Navy* (the same as those of the two European ships), and it is necessary to include them in the Numbers to be Voted for the Fleet, &c., in order to bring them under the provisions of the Naval Discipline Act.

Vote 2.

VICTUALS AND CLOTHING FOR SEAMEN AND MARINES.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the EXPENSE of VICTUALS and CLOTHING for SEAMEN and MARINES.

One Million Three Hundred and Thirty-five Thousand Eight Hundred and Forty-two Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—PROVISIONS RECEIVED UNDER CONTRACT, &c. - - - -	628,590	626,968	1,622	—
B.—SAVINGS (PAYMENTS FOR PROVISIONS NOT TAKEN UP) - -	128,253	144,390	- -	16,137
C.—ALLOWANCES IN LIEU OF PROVISIONS AND FUEL TO OFFICERS AND MEN BORNE ON SHIPS' BOOKS BUT NOT VICTUALLED -	173,323	162,497	10,826	—
D.—LIGHTS AND CULINARY FUEL FOR SERVICE AFLOAT - -	64,286	63,590	696	—
E.—ALLOWANCES IN LIEU OF LIGHTS TO OFFICERS, &c., AFLOAT	19,315	20,109	- -	794
F.—MESS ALLOWANCES TO OFFICERS - - - - -	56,184	56,184	—	—
G.—OFFICERS' MESS TRAPS, FURNITURE, &c. - - - - -	10,000	10,000	—	—
H.—VICTUALLING STORES RECEIVED UNDER CONTRACT, &c. -	33,400	30,000	3,400	—
I.—FREIGHT, LIGHTERAGE, AND OTHER CHARGES ON PRO- VISIONS AND VICTUALLING STORES - - - - -	17,000	16,500	500	—
K.—ESTIMATED VALUE OF ISSUES OF PROVISIONS, &c. TO OTHER DEPARTMENTS OF GOVERNMENT, &c. - - - - -	84,977	- -	84,977	—
L.—SEAMEN'S CLOTHING, SOAP, AND TOBACCO - - - - -	37,126	38,960	- -	1,834
M.—MARINE CLOTHING AND APPOINTMENTS - - - - -	53,825	48,439	5,386	—
N.—ALLOWANCES IN LIEU OF MARINE CLOTHING, &c. - - -	5,019	5,400	- -	381
O.—MARINE BARRACK STORES - - - - -	19,021	18,577	444	—
P.—ESTIMATED VALUE OF ISSUES OF CLOTHING, &c. TO OTHER DEPARTMENTS OF GOVERNMENT, &c. - - - - -	5,523	- -	5,523	—
£.	1,335,842	1,241,614	113,374	19,146

NET INCREASE - - - £. 94,228.

Vote 2.—VICTUALS AND CLOTHING FOR SEAMEN AND MARINES—*continued.*

III. DETAILS of the foregoing Charges.

PROVISIONS, &c.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
50,060	For the Purchase of Provisions and Victualling Stores and other Charges for Fifty Thousand and Sixty Men and Boys, including Eight Thousand Royal Marines, and Three Thousand One Hundred Boys in Training Ships, to be employed in Her Majesty's Fleet, and for Three Thousand Two Hundred Men and Boys for Her Majesty's Coast Guard Service Afloat, for One Year, ending the 31st March 1869;		
3,200	also,— For the Purchase of Provisions and Victualling Stores and other Charges for the undermentioned Services, during the same period; viz.		
4,500.	For Four Thousand Five Hundred Men to be employed in Her Majesty's Coast Guard Service, and borne on the Books of District Ships for Service on Shore ;		
5,000	For Five Thousand Royal Naval Coast Volunteers when on Drill Afloat ;		
16,000	For Sixteen Thousand Seamen of the Royal Naval Reserve when on Drill Afloat ;		
717.	For Seven Hundred and Seventeen Men and Boys, to be employed on board Steam Tugs, Hoys, &c., for Yard Service Afloat ; viz. :		
		1868/69.	1867/68.
A.—For Provisions :		£.	£.
	For the Fleet - - - - -	583,904	585,105
	For Coast Guard Service Afloat - - - - -	37,367	33,713
	For Royal Naval Coast Volunteers Afloat - - - - -	4,586	4,552
	For Yard Service Afloat - - - - -	2,733	3,598
			628,590 - -
B.—For Savings (Payments for Provisions not taken up) :			
	For the Fleet - - - - -	119,747	135,852
	For Coast Guard Service Afloat - - - - -	7,668	7,827
	For Yard Service Afloat - - - - -	838	711
			128,253 - -
C.—For Money Allowances in lieu of Provisions to Officers and Men borne on Ships' Books but not Victualled :			
	For the Fleet - - - - -	27,100	19,703
	For Coast Guard Service on Shore - - - - -	109,500	104,920
	For Royal Naval Reserve - - - - -	29,867	29,867
	For Yard Service Afloat - - - - -	6,856	8,007
			173,323 - -
D.—For Lights and Culinary Fuel for Service Afloat, for		{Fleet - £. 63,759 Yard Service 527}	64,286 - -
E.—For Money Allowance in lieu of Lights to Officers Afloat, for		{Fleet - £. 18,638 Yard Service 677}	19,315 - -
F.—For Money Allowance		in lieu of Rations to Officers {	56,184 - -
G.—For Mess Traps - - - - -			10,000 - -
H.—For the Purchase of Victualling Stores ; viz. :			
	Coals for Victualling Yards, Casks, Packages, and Small Stores - - -	33,400 - -	30,000 - -
I.—For Freight, Lighterage, and other Charges on Provisions and Victualling Stores		17,000 - -	16,500 - -
		£.	1,130,351 - -
K.—For the Estimated Value of Issues to other Departments of Government, &c.		* 84,977 - -	—
TOTAL PROVISIONS, &c. - - -		£.	1,130,238 - -

* The amount received on account of these Issues has hitherto been credited to the respective Detailed Heads of Estimate.

Vote 2.—VICTUALS and CLOTHING for SEAMEN and MARINES—*continued.*

		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
L.	CLOTHING, &c.		
	£.		
	To provide for Seamen's Clothing, Soap, and Tobacco, for the Year 1868-69 - 216,327		217,000 - -
	To provide for Gratuitous Issues of Clothing, &c., to Seamen, Boys, and Marines for Coaling Her Majesty's Steam Vessels - - - - - 16,900		16,540 - -
	To provide for Gratuitous Issues of Bedding to Seamen and Boys on First Entry - - - - - 8,870		8,830 - -
	To provide for Gratuitous Issue of Half Boots (annually) to Marines serving Afloat - - - - - 2,408		2,400 - -
	To provide for a Commuted Allowance in lieu of Gratuitous Issues of Clothing to Ten Years' Continuous Service Men - - - - - 7,900		6,570 - -
	To provide for Gratuitous Issues to Working Parties of the Reserve, Dépôt Ships, and for Wear and Tear of Clothes - - - - - 4,500		3,500 - -
	To provide for the Cost of Caps issued Gratuitously to Seamen of the Royal Naval Reserve - - - - - 290		290 - -
	To provide Clothing, &c., for the Use of Royal Naval Coast Volunteers when on Drill Afloat - - - - - 1,650		2,000 - -
	258,845		257,130 - -
	Abate—		218,170 - -
	Estimated Amount of Charges against the Wages of Seamen, &c. - 221,719	37,126 - -	38,960 - -
		1868/69.	1867/68.
	£.	£.	
M.—	To provide for Clothing and Appointments of Royal Marines, for Making up and Altering Marine Clothing, and for the Gratuitous Issue of Half Boots and Blue Serge Tunics to Royal Marines - - - - -	60,720	56,559
	Deduct,—Estimated Amount of Charges against the Wages of Marines on account of Issues - - -	6,895	8,120
	£.	53,825	48,439
N.—	For Money Allowances, in lieu of Clothing, to Royal Marines	5,019	5,400
		58,844 - -	53,839 - -
O.—	To provide for Marine Barrack Stores - - - - -	19,021 - -	18,577 - -
	£.	114,991 - -	111,376 - -
P.—	For the Estimated Value of Issues to other Departments of Government - - -	* 5,523 - -	- -
	TOTAL CLOTHING, &c. - - - £.	120,514 - -	111,376 - -

* The amount received on account of these Issues has hitherto been credited to the respective Detailed Heads of Estimate.

VOTE 3.

ADMIRALTY OFFICE.

I. ESTIMATE of the Sum which will be required, in the Year ending 31st March 1869, to defray the EXPENSES of the ADMIRALTY OFFICE.

One Hundred and Eighty-two Thousand Three Hundred and Sixty-four Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—SALARIES, WAGES, AND ALLOWANCES, ADMIRALTY OFFICE -	171,064	165,718	5,346	—
B.—RENTS, RATES, AND TAXES - - - - ditto - -	2,600	2,600	—	—
C.—FUEL AND LIGHT - - - - ditto - -	2,400	2,400	—	—
D.—TRAVELLING EXPENSES - - - - ditto - -	3,300	3,300	—	—
E.—POSTAGE AND CARRIAGE OF PARCELS AND CONTINGENCIES, ADMIRALTY OFFICE - - - -	3,000	2,000	1,000	—
£.	182,364	176,018	6,346	—

NET INCREASE - - - £. 6,346.

III.

DETAILS of the above.

	REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
	£.	s.	d.	£.	s.	d.
SALARIES of the LORDS COMMISSIONERS for executing the Office of Lord High Admiral of Great Britain and Ireland, viz.:						
First Lord - - - - -	£. 4,500	—	—	9,700	—	—
Three Naval Lords, at £. 1,000 each* - - - - -	3,000	—	—	9,700	—	—
One Naval Lord* (including Allowance in lieu of a House) - - - - -	1,200	—	—	2,000	—	—
One Civil Lord (without a House) - - - - -	1,000	—	—	1,500	—	—
First Secretary - - - - -	—	—	—	300	—	—
Second Secretary - - - - -	—	—	—	507	—	—
Private Secretary to the First Lord* - - - - -	—	—	—	—	—	—
PRINCIPAL OFFICERS OF THE NAVY:						
Controller of the Navy* - - - - -	1,300	—	—	1,300	—	—
Accountant-General of the Navy - - - - -	1,300	—	—	1,300	—	—
Storekeeper-General of the Navy - - - - -	1,300	—	—	1,300	—	—
Comptroller of Victualling - - - - -	1,300	—	—	1,300	—	—
Director-General of the Medical Department of the Navy - - - - -	1,300	—	—	1,300	—	—
Director of Engineering and Architectural Works - - - - -	1,300	—	—	1,300	—	—
<i>Note.</i> —The salaries of the Principal Officers include an allowance of £. 300 in lien of a house, which will be repaid whenever an officer is in occupation of an Admiralty residence.						
DEPARTMENT OF THE SECRETARY.						
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.						
	NUMBER.					
	1868/69.	1867/68.				
Chief Clerk - - - - -	1	1	from £. 1,000 to £. 1,100 p' ann.	1,100	—	1,050
1st Class - - - - -	10	11	„ 650 to 900 „ -	8,411	—	9,322
2d ditto - - - - -	14	14	„ 350 to 550 „ -	6,509	—	6,439
3d ditto - { 1st Section - - - - -	12	12	„ 250 to 350 „ -	3,564	—	3,670
2d ditto - - - - -	13	13	„ 100 to 250 „ -	1,786	—	1,617
	50	51				
Salaries - - - - £.	21,370	22,098				
Two Digest Writers, from 200 l. to 350 l. per annum - - - - -	—	—	—	503	—	483
Two Index Writers, from 100 l. to 250 l. per annum - - - - -	—	—	—	303	—	283
Librarian, from 150 l. to 250 l. per annum - - - - -	—	—	—	210	—	200
French and Spanish Translator - - - - -	—	—	—	100	—	100
Temporary Employment of Writers - - - - -	—	—	—	947	—	876
Carried forward - - - £.	44,733	—	—	45,547	—	—

* In addition to Half-pay.

Vote 3.—ADMIRALTY OFFICE—continued.

				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
				£. s. d.	£. s. d.
Brought forward - - -				44,733 - -	45,547 - -
DEPARTMENTS OF THE PRINCIPAL OFFICERS:					
DEPARTMENT of the CONTROLLER of the NAVY:					
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.					
		NUMBER.			
		1868/69.	1867/68.		
Chief Clerk - - - -		1	-	at - - - -	850 - -
1st Class { 1st Section - - - -		2	2	from £. 670 to £. 800 per ann.	1,487 - -
2d ditto { 2d ditto - - - -		1	1	" 520 to 650 "	537 - -
2d ditto - - - -		8	7	" 315 to 500 "	3,133 - -
3d ditto - - - -		14	14	" 100 to 300 "	1,854 - -
		26	24		
Salaries - - - £.		7,861	7,009		
Temporary Employment of Writers - - - -				1,256 - -	876 - -
Chief Constructor of the Navy (increase of Salary of 100 l. not to be continued to his Successor) - - - -				1,000 - -	1,000 - -
Three Assistant Constructors, at 500 l. each - - - -				1,500 - -	1,500 - -
Surveyor and Inspector of Contract Work - - - -				£. 600 - -	
Allowance for House Rent - - - -				100 - -	
(This officer is also paid an allowance of 52 l. a year for superintending Ships building by Contract, which is provided for under Vote No. 10, Section 2.)				700 - -	700 - -
Seven Draughtsmen { Chief, from 520 l. to 650 l. per annum - - - -				£. 650 - -	
to the Controller { One 2d Class, from 315 l. to 500 l. per annum - - - -				466 - -	
of the Navy { Five 3d ditto, from 180 l. to 300 l. " - - - -				1,101 - -	
Two Modellers, at 10 s. a day each - - - -				313 - -	313 - -
Valuer and Inspector of Dockyard Work - - - -				700 - -	700 - -
Two Assistants to ditto - - - -				{ One at £. 450 - -	
				" 350 - -	800 - -
Engineer in Chief of the Navy - - - -				900 - -	900 - -
Assistant to ditto (additional Salary of 50 l. not to be continued to Successor) - - - -				550 - -	550 - -
Inspector of Machinery Afloat (in addition to Sea Pay) - - - -				200 - -	200 - -
Draughtsmen { One 2d Class, from 315 l. to 500 l. per annum - - - -				£. 426 - -	
{ One 3d ditto, from 180 l. to 300 l. " - - - -				255 - -	
Writer and Calculator, from 315 l. to 500 l. per annum - - - -				460 - -	445 - -
(TOTAL for the Department of the Controller of the Navy - £. 19,138.)					
DEPARTMENT of the ACCOUNTANT-GENERAL of the NAVY:					
Assistant Accountant General of the Navy; For Pay of the Navy, Prize, and Claims - - - -				1,000 - -	900 - -
Ditto - - - ditto - - - For Cash and Expense Accounts - - - -				1,000 - -	-
Two Chief Clerks, at 850 l. each - - - -				£. 1,700 - -	
Inspector of Yard Accounts - - - -				850 - -	2,550 - -
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.					
		NUMBER.			
		1868/69.	1867/68.		
1st Class - - - -		9	9	from £. 520 to £. 700 per ann.	5,962 - -
2d ditto - - - -		41	39	" 315 to 500 "	18,509 - -
3d ditto - - - -		105	103	" 100 to 300 "	20,388 - -
		155	151		
Salaries - - - £.		44,859	43,078		
Allowance to Estimate Clerks - - - -				200 - -	200 - -
Temporary Employment of Writers - - - -				3,667 - -	3,446 - -
(TOTAL for the Department of the Accountant-General - £. 53,276.)					
Carried forward - - - £.				117,147 - -	113,517 - -

Vote 3.—ADMIRALTY OFFICE—continued.

						REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.																																																												
						£. s. d.	£. s. d.																																																												
Brought forward - - -						117,147 - -	113,517 - -																																																												
DEPARTMENT of the STOREKEEPER-GENERAL of the NAVY:																																																																			
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.																																																																			
<table><thead><tr><th colspan="2">NUMBER.</th></tr><tr><th>1868/69.</th><th>1867/68.</th></tr></thead><tbody><tr><td>1st Class { 1st Section - - -</td><td>1</td><td>1</td><td rowspan="4">from 670 l. to 800 l. per annum</td><td>745</td><td>- -</td><td>725</td><td>- -</td></tr><tr><td>2d ditto - - -</td><td>1</td><td>1</td><td>" 520 l. to 650 l. " -</td><td>552</td><td>- -</td><td>532</td><td>- -</td></tr><tr><td>2d ditto - - -</td><td>5</td><td>5</td><td>" 315 l. to 500 l. " -</td><td>2,002</td><td>- -</td><td>1,927</td><td>- -</td></tr><tr><td>3d ditto - - -</td><td>14</td><td>14</td><td>" 100 l. to 300 l. " -</td><td>2,680</td><td>- -</td><td>2,561</td><td>- -</td></tr><tr><td colspan="2"></td><td>21</td><td>21</td><td colspan="4"></td></tr><tr><td colspan="2">Salaries - - - £.</td><td>5,979</td><td>5,745</td><td colspan="4"></td></tr></tbody></table>						NUMBER.		1868/69.	1867/68.	1st Class { 1st Section - - -	1	1	from 670 l. to 800 l. per annum	745	- -	725	- -	2d ditto - - -	1	1	" 520 l. to 650 l. " -	552	- -	532	- -	2d ditto - - -	5	5	" 315 l. to 500 l. " -	2,002	- -	1,927	- -	3d ditto - - -	14	14	" 100 l. to 300 l. " -	2,680	- -	2,561	- -			21	21					Salaries - - - £.		5,979	5,745														
NUMBER.																																																																			
1868/69.	1867/68.																																																																		
1st Class { 1st Section - - -	1	1	from 670 l. to 800 l. per annum	745	- -	725	- -																																																												
2d ditto - - -	1	1		" 520 l. to 650 l. " -	552	- -	532	- -																																																											
2d ditto - - -	5	5		" 315 l. to 500 l. " -	2,002	- -	1,927	- -																																																											
3d ditto - - -	14	14		" 100 l. to 300 l. " -	2,680	- -	2,561	- -																																																											
		21	21																																																																
Salaries - - - £.		5,979	5,745																																																																
Temporary Employment of Writers - - - - -						464 - -	276 - -																																																												
Pay and Allowances of a Staff Commander, R. N., Chief Engineer, R. N., and Foreman } of a Dockyard, serving as a Committee for checking Store Accounts, &c. - - }						1,283 - -	1,283 - -																																																												
(TOTAL for the Department of the Storekeeper-General - £. 7,726.)																																																																			
DEPARTMENT of the COMPTROLLER of VICTUALLING:																																																																			
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.																																																																			
<table><thead><tr><th colspan="2">NUMBER.</th></tr><tr><th>1868/69.</th><th>1867/68.</th></tr></thead><tbody><tr><td>Chief Clerk - - - - -</td><td>1</td><td>1</td><td>at - - - - -</td><td>850</td><td>- -</td><td>850</td><td>- -</td></tr><tr><td>1st Class { 1st Section - - -</td><td>1</td><td>1</td><td>from 670 l. to 800 l. per annum</td><td>800</td><td>- -</td><td>797</td><td>- -</td></tr><tr><td>2d ditto - - -</td><td>3</td><td>3</td><td>" 520 l. to 650 l. " -</td><td>1,833</td><td>- -</td><td>1,950</td><td>- -</td></tr><tr><td>2d ditto - - -</td><td>11</td><td>11</td><td>" 315 l. to 500 l. " -</td><td>5,220</td><td>- -</td><td>5,318</td><td>- -</td></tr><tr><td>3d ditto - - -</td><td>25</td><td>25</td><td>" 100 l. to 300 l. " -</td><td>4,811</td><td>- -</td><td>4,866</td><td>- -</td></tr><tr><td colspan="2"></td><td>41</td><td>41</td><td colspan="4"></td></tr><tr><td colspan="2">Salaries - - - £.</td><td>13,514</td><td>13,781</td><td colspan="4"></td></tr></tbody></table>						NUMBER.		1868/69.	1867/68.	Chief Clerk - - - - -	1	1	at - - - - -	850	- -	850	- -	1st Class { 1st Section - - -	1	1	from 670 l. to 800 l. per annum	800	- -	797	- -	2d ditto - - -	3	3	" 520 l. to 650 l. " -	1,833	- -	1,950	- -	2d ditto - - -	11	11	" 315 l. to 500 l. " -	5,220	- -	5,318	- -	3d ditto - - -	25	25	" 100 l. to 300 l. " -	4,811	- -	4,866	- -			41	41					Salaries - - - £.		13,514	13,781						
NUMBER.																																																																			
1868/69.	1867/68.																																																																		
Chief Clerk - - - - -	1	1	at - - - - -	850	- -	850	- -																																																												
1st Class { 1st Section - - -	1	1	from 670 l. to 800 l. per annum	800	- -	797	- -																																																												
2d ditto - - -	3	3	" 520 l. to 650 l. " -	1,833	- -	1,950	- -																																																												
2d ditto - - -	11	11	" 315 l. to 500 l. " -	5,220	- -	5,318	- -																																																												
3d ditto - - -	25	25	" 100 l. to 300 l. " -	4,811	- -	4,866	- -																																																												
		41	41																																																																
Salaries - - - £.		13,514	13,781																																																																
Temporary Employment of Clerks and Writers - - - - -						1,801 - -	1,587 - -																																																												
(TOTAL for the Department of the Comptroller of Victualling - £. 15,315.)																																																																			
DEPARTMENT of the MEDICAL DIRECTOR-GENERAL of the NAVY:																																																																			
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.																																																																			
<table><thead><tr><th colspan="2">NUMBER.</th></tr><tr><th>1868/69.</th><th>1867/68.</th></tr></thead><tbody><tr><td>1st Class, 1st Section - - -</td><td>1</td><td>1</td><td>from 670 l. to 800 l. per annum</td><td>800</td><td>- -</td><td>800</td><td>- -</td></tr><tr><td>2d ditto - - -</td><td>4</td><td>4</td><td>" 315 l. to 500 l. " -</td><td>1,812</td><td>- -</td><td>1,755</td><td>- -</td></tr><tr><td>3d ditto - - -</td><td>9</td><td>9</td><td>" 100 l. to 300 l. " -</td><td>1,777</td><td>- -</td><td>1,676</td><td>- -</td></tr><tr><td colspan="2"></td><td>14</td><td>14</td><td colspan="4"></td></tr><tr><td colspan="2">Salaries - - - £.</td><td>4,389</td><td>4,231</td><td colspan="4"></td></tr></tbody></table>						NUMBER.		1868/69.	1867/68.	1st Class, 1st Section - - -	1	1	from 670 l. to 800 l. per annum	800	- -	800	- -	2d ditto - - -	4	4	" 315 l. to 500 l. " -	1,812	- -	1,755	- -	3d ditto - - -	9	9	" 100 l. to 300 l. " -	1,777	- -	1,676	- -			14	14					Salaries - - - £.		4,389	4,231																						
NUMBER.																																																																			
1868/69.	1867/68.																																																																		
1st Class, 1st Section - - -	1	1	from 670 l. to 800 l. per annum	800	- -	800	- -																																																												
2d ditto - - -	4	4	" 315 l. to 500 l. " -	1,812	- -	1,755	- -																																																												
3d ditto - - -	9	9	" 100 l. to 300 l. " -	1,777	- -	1,676	- -																																																												
		14	14																																																																
Salaries - - - £.		4,389	4,231																																																																
Temporary Employment of Writers - - - - -						91 - -	117 - -																																																												
(TOTAL for the Department of the Medical Director-General - £. 4,480.)																																																																			
Carried forward - - - £.						144,668 - -	140,537 - -																																																												

Vote 3.—ADMIRALTY OFFICE—continued.

				REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
				£.	s.	d.	£.	s.	d.
Brought forward - - -				144,668	-	-	140,537	-	-
DEPARTMENT of the DIRECTOR of TRANSPORTS:									
Director of Transports - - - - -				1,200	-	-	1,200	-	-
Military Officer to assist the Director of Transports - - - - -				365	-	-	365	-	-
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.									
				NUMBER.					
				1868/69.	1867/68.				
Chief Clerk - - - - -	1	1	at - - - - -	850	-	-	850	-	-
1st Class, 1st Section - - - - -	1	1	from 650 l. to 800 l. per annum	761	-	-	741	-	-
1st Class, 2d Section - - - - -	1	1	„ 520 l. to 650 l. „ -	555	-	-	535	-	-
2d ditto - - - - -	4	4	„ 315 l. to 500 l. „ -	1,665	-	-	1,620	-	-
3d ditto - - - - -	10	10	„ 100 l. to 300 l. „ -	1,542	-	-	1,449	-	-
	17	17							
Salaries - - - £.	5,373	5,195							
Temporary Employment of Writers - - - - -				652	-	-	563	-	-
(TOTAL for the Department of the Director of Transports - £. 7,590.)									
DEPARTMENT of the DIRECTOR of ENGINEERING and ARCHITECTURAL WORKS:									
Deputy Director of Engineering and Architectural Works - - - - -				800	-	-	900	-	-
Examiner of Accounts, Returns, &c., from 350 l. to 500 l. per annum - - - - -				500	-	-	500	-	-
Principal Clerk - - - - - from 350 l. to 500 l. „ - - - - -				399	-	-	384	-	-
Two Clerks and Accountants - - - from 90 l. to 300 l. „ - - - - -				500	-	-	480	-	-
Chief Draughtsman - - - - - from 350 l. to 500 l. „ - - - - -				422	-	-	407	-	-
Two Draughtsmen - - - - - from 150 l. to 250 l. „ - - - - -				300	-	-	300	-	-
Clerk of the Works - - - - - from 190 l. to 220 l. „ - - - - -				220	-	-	220	-	-
Temporary Employment of Clerks and Draughtsmen - - - - -				2,079	-	-	1,341	-	-
Allowance for House Rent to Clerk of the Works - - - - -				35	-	-	35	-	-
(TOTAL for the Department of the Director of Works - £. 5,255.)									
OFFICE of the REGISTRAR of CONTRACTS AND PUBLIC SECURITIES:									
Registrar of Contracts and Public Securities - - - - -				850	-	-	850	-	-
CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.									
				NUMBER.					
				1868/69.	1867/68.				
1st Class, 1st Section - - - - -	1	1	from 650 l. to 800 l. per annum	712	-	-	695	-	-
2d ditto - - - - -	2	2	„ 315 l. to 500 l. „ -	795	-	-	764	-	-
3d ditto - - - - -	4	4	„ 100 l. to 300 l. „ -	615	-	-	570	-	-
	7	7							
Salaries - - - £.	2,122	2,029							
Temporary Employment of Writers - - - - -				295	-	-	297	-	-
(TOTAL for the Office of the Registrar of Contracts, &c. - £. 3,267.)									
Carried forward - - - £.				160,780	-	-	155,603	-	-

No. 3.—ADMIRALTY OFFICE—continued.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
Brought forward - - -	160,780 - -	155,602 - -
MESSENGERS, &c.		
In the DEPARTMENT of the SECRETARY :		
Head Messenger, Whitehall - - - - - £. 200 }	265 - -	265 - -
Allowance to ditto as Office Keeper - - - - - 65 }		
1st Class Messengers, 6 No. { 1 Hall Porter - - - - - £. 150 }		
{ 4 for Board Room { 2 at 150 l. per annum - - - 300 }	810 - -	810 - -
{ 1 for First Lord's Office { 2 at 120 l. " - - 240 }		
{ 1 for First Lord's Office - - - - - 120 }		
2d Class Messengers, 7 No., from 90 l. to 100 l. per annum - - - - -	666 - -	670 - -
3d Class Messengers, 7 No., from 75 l. to 85 l. - - - - -	541 - -	540 - -
For Wages and Allowances of Messengers and others on Day Pay; viz.:		
2 Extra Messengers, 3 Boy Messengers, 3 Labourers, 1 Watchman, Assistant to Librarian, Binder, and Messengers' Allowances - - - - -	873 - -	754 - -
Allowance to Office Keeper to cover the Wages of Female Servants - - - - -	171 - -	171 - -
In the DEPARTMENTS of the PRINCIPAL OFFICERS, &c.:		
Head Messenger, Somerset House - - - - -	150 - -	150 - -
1st Class Messengers, 6 No., at 100 l. each - - - - -	600 - -	600 - -
2d Class Messengers, 14 No., from 85 l. to 90 l. per annum - - - - -	1,236 - -	1,232 - -
3d Class Messengers, 28 No., from 70 l. to 80 l. per annum - - - - -	2,060 - -	2,045 - -
Deptford and Woolwich Messenger - - - - -	80 - -	80 - -
For the Wages and Allowances of 20 Messengers and others on Day Pay, viz.:		
6 Messengers, 1 Assistant Messenger, and 8 Boy Messengers, 3 Labourers, and 2 Temporary Labourers - - - - -	967 - -	951 - -
Allowances to Messengers, &c., for the Charge of Repositories, Cleaning Rooms, &c. - - - - -	707 - -	707 - -
(Note.—For Statement, showing the appropriation of the Messengers, &c., in the Departments of the Principal Officers, &c., see APPENDIX, No. 8, p. 160.)		
Additional Day's Pay to Messengers, for Leap Year - - - - -	—	6 - -
Clothing for Porter and Assistant Porter - - - - -	22 - -	22 - -
Attendance of Police Officers, and extra Allowances to Messengers, for Watching at Night and Attendance on Sundays - - - - -	376 - -	352 - -
Housekeeper, Somerset House - - - - -	100 - -	100 - -
Housekeeper's Servants - - - - -	660 - -	660 - -
A.—SALARIES, WAGES, and ALLOWANCES, ADMIRALTY OFFICE - - - - - £.	171,064 - -	165,718 - -
B.—Rents, Rates and Taxes - - - - -	2,600 - -	2,600 - -
C.—Fuel and Lighting, including Gas - - - - -	2,400 - -	2,400 - -
D.—Travelling Expenses, &c. of Officers of the Admiralty on the Public Service - - - - -	3,300 - -	3,300 - -
E.—Postage and Carriage of Parcels, &c. and Contingencies, Admiralty Office - - - - -	3,000 - -	2,000 - -
TOTAL - - - - - £.	182,364 - -	176,018 - -

VOTE 4.

COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, AND ROYAL NAVAL RESERVE.

I. ESTIMATE of the Sum which will be required, in the Year ending 31st March 1869, to defray the EXPENSES of the COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, and ROYAL NAVAL RESERVE.

Two Hundred and Sixty-three Thousand Nine Hundred and Twenty-six Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—SALARIES, WAGES, AND ALLOWANCES, COAST GUARD OFFICE	5,394	5,535	—	141
B.—RENTS, RATES, AND TAXES - - - - - DITTO - - -	167	167	—	—
C.—TRAVELLING EXPENSES AND SUBSISTENCE ALLOWANCES, COAST GUARD OFFICE - - - - -	700	700	—	—
D.—CONTINGENCIES, COAST GUARD OFFICE - - - - -	180	180	—	—
E.—PAY AND ALLOWANCES OF OFFICERS AND MEN, COAST GUARD ESTABLISHMENTS ON SHORE - - - - -	23,546	29,817	—	6,271
F.—RENTS, RATES, TAXES, AND INSURANCE OF BUILDINGS, COAST GUARD ESTABLISHMENTS ON SHORE - - -	35,800	35,600	200	—
G.—TRAVELLING EXPENSES, AND REMOVAL OF OFFICERS AND MEN AND THEIR FAMILIES, COAST GUARD ESTABLISH- MENTS ON SHORE, &c. - - - - -	18,890	17,890	1,000	—
H.—FUEL AND LIGHT, COAST GUARD ESTABLISHMENTS ON SHORE - - - - -	4,800	4,800	—	—
I.—CONTINGENCIES, COAST GUARD ESTABLISHMENTS ON SHORE	5,264	5,193	71	—
K.—DRILL OF THE COAST GUARD AND ROYAL NAVAL RESERVE	4,150	4,150	—	—
L.—ROYAL NAVAL COAST VOLUNTEERS; WAGES, BOUNTY MONEY, BILLETING, &c. - - - - -	20,000	20,000	—	—
M.—ROYAL NAVAL RESERVE; WAGES, ALLOWANCES, &c. - -	145,035	143,035	2,000	—
£.	263,926	267,067	3,271	6,412

NET DECREASE - - - £. 3,141.

No. 4.—COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, and ROYAL NAVAL RESERVE—continued.

III.

DETAILS of the foregoing Charges.

COAST GUARD SERVICE:				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
DEPARTMENT of the CONTROLLER-GENERAL:				£. s. d.	£. s. d.
Controller-General (Commodore of the 1st Class.)		Borne on the books of Her Majesty's Ship "Pembroke," and paid Sea Pay and Allowances, under Vote No. 1.—See APPENDIX, No. 1, p. 140.		—	—
Deputy Controller-General (Additional Captain.)					
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:					

* In addition to Half-pay.

No. 4.—COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, AND ROYAL NAVAL RESERVE—*continued.*COAST GUARD SERVICE—*continued.*

CIVIL OFFICERS and ESTABLISHMENTS ON SHORE:

Pay and Allowances of the undermentioned Officers and Men to be employed in Her Majesty's Coast Guard Service, *on Shore*, and not borne on Ships' Books, viz.:

		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
16 Persons serving as Inspecting Officers of Divisions			
2 at 219 <i>l.</i> per annum		£. 438 - -	
1 at 182 <i>l.</i> 10 <i>s.</i> „		- 182 - -	
13 at 146 <i>l.</i> - „		- 1,898 - -	
		2,518 - -	2,920 - -
18 Persons serving as Officers in command of Stations			
at various rates of Pay, from 100 <i>l.</i> to 146 <i>l.</i> per annum		2,318 - -	2,956 - -
285 Chief Boatmen, Commissioned and other Boatmen, at various rates of Pay, from 54 <i>l.</i> 15 <i>s.</i> to 73 <i>l.</i> per annum		16,316 - -	21,608 - -
17 Mounted Guard:			
5 Serjeants at 91 <i>l.</i> 5 <i>s.</i> per annum		£. 456 - -	
5 Corporals at 82 <i>l.</i> 2 <i>s.</i> 6 <i>d.</i> per annum		- 410 - -	
7 Privates at 73 <i>l.</i> per annum		- 511 - -	
		1,377 - -	1,377 - -
14 Non-Commissioned Officers of Marines employed as Clerks on Shore at 24 <i>s.</i> or 27 <i>s.</i> a week each, in addition to their Pensions, and 2 Clerks to assist Inspecting Commanders		1,017 - -	873 - -
Additional Day's Pay for Leap Year to the foregoing		- - -	83 - -
350	E.—PAY and ALLOWANCES of OFFICERS and MEN, COAST GUARD ESTABLISHMENTS ON SHORE	£. 23,546 - -	29,817 - -
Lodging Allowances to Officers and Men unprovided with Quarters		3,200 - -	3,200 - -
Rents and Insurances of Buildings (Stations, Officers' Houses, and Boatmen's Cottages)		30,900 - -	30,900 - -
Rates and Taxes		1,700 - -	1,500 - -
F.—RENTS, RATES, TAXES and INSURANCES of BUILDINGS, COAST GUARD ESTABLISHMENTS ON SHORE		£. 35,800 - -	35,600 - -
Allowances to Inspecting Officers of Divisions on Visiting Duty		7,890 - -	7,890 - -
Expenses of removing Officers and Men and their Families from one Station to another		4,000 - -	3,000 - -
Allowances to Inspecting Officers of Divisions for the Keep of Horses, and Forage		7,000 - -	7,000 - -
Allowances to the Mounted Guard			
G.—TRAVELLING EXPENSES and REMOVAL of OFFICERS, and MEN and their FAMILIES		£. 18,890 - -	17,890 - -
H.—Fuel and Light, Coast Guard Establishments on Shore		4,800 - -	4,800 - -
Allowances to Ministers of Religion for Spiritual Instruction of the Coast Guard Men and their Families		400 - -	400 - -
Stationery Allowances (including Coast Guard Tenders)		1,300 - -	1,300 - -
Postage and other Contingent Expenses (including Coast Guard Tenders and Royal Naval Coast Volunteers)		3,564 - -	3,493 - -
I.—CONTINGENCIES, COAST GUARD ESTABLISHMENTS ON SHORE		£. 5,264 - -	5,193 - -
		£. 88,300 - -	93,300 - -

No. 4.—COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, AND ROYAL NAVAL RESERVE—*continued.*COAST GUARD SERVICE—*continued.*

K.—DRILL OF THE COAST GUARD AND ROYAL NAVAL RESERVE:

	REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
	£.	s.	d.	£.	s.	d.
Drilling Men belonging to the Coast Guard to the use of the Great Gun - - - - -	1,000	-	-			
Remuneration to Officers of the Coast Guard who are in charge of Batteries when Drilling Royal Naval Reserve Men - - -	650	-	-	1,650	-	-
The Erection and Repair of Batteries for Drilling the Men of the Coast Guard - - - - -	800	-	-			
Ditto - ditto - Men of the Royal Naval Reserve - - -	1,700	-	-	2,500	-	-
	£.	4,150	-	£.	4,150	-
TOTAL for the COAST GUARD SERVICE - - -	£.	98,891	-	£.	104,032	-

NOTE.—In addition to the Amount provided in the foregoing Vote for the Coast Guard Service, amounting to - - - - -

£. s. d.
98,891 - -

The following Sums are likewise included in the undermentioned Votes of the Navy
Estimates for Expenses on account of that Service, viz.:—

	Under Vote.	£.	s.	d.
Sea-pay to Officers and Crews borne on the Books of Her Majesty's Ships and Vessels to be employed in the Coast Guard Service - - - - -	No. 1.	367,718	-	-
Victuals, &c. for ditto - - - - -	No. 2.	170,164	-	-
Supplies to, and Local Purchases of Naval Stores at, Coast Guard Stations - - - - -	No. 10. (Sec. 1.)	39,500	-	-
Building and Repairing Coast Guard Tenders - - - - -	No. 10. (Sec. 2.)	12,000	-	-
New Works and Repairs of Buildings, &c. - - - - -	No. 11.	20,000	-	-
Medical Attendance, Medicines, &c. - - - - -	No. 12.	10,732	-	-
Civil Pensions of Coast Guard Officers and Men - - - - -	No. 16.	43,433	-	-
		663,547	-	-
TOTAL CHARGE for the COAST GUARD SERVICE - - -		£.	762,438	-

In addition to the foregoing Expense, 31 Vessels have been lent for the Coast Guard Service since its transfer }
to the Admiralty, the estimated Value of which is - - - - - } £. 36,138

TOTAL Number of MEN to be Employed in Her Majesty's COAST GUARD SERVICE:				Number.
Number to be borne on Ships' Books and employed <i>afloat</i> (provided for under Vote No. 1) - -	-	-	-	3,200
Ditto, but to be employed <i>on Shore</i> (under Vote No. 1) - - - - -	-	-	-	4,500
Ditto, not borne on Ships' Books, to be employed <i>on Shore</i> (provided for under Vote No. 4) -	-	-	-	350
TOTAL - - -	-	-	-	8,050

L.—ROYAL NAVAL COAST VOLUNTEERS:

(WAGES, BOUNTY MONEY, BILLETING, &c.)

	£.	s.	d.	£.	s.	d.
Bounty Money to Volunteers, from 1 <i>l.</i> 1 <i>s.</i> to 1 <i>l.</i> 6 <i>s.</i> per man per annum, Conduct Money, Expenses of Billeting, and Wages when <i>afloat</i> , at 1 <i>s.</i> 7 <i>d.</i> a day - -	20,000	-	-	20,000	-	-

NOTE.—A sum of 6,236*l.* is taken under Vote No. 2, for the Victualling and Clothing of the Royal Naval Coast Volunteers when on drill *afloat* (provision being made for 5,000 in number).

No. 4.—COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, AND ROYAL NAVAL RESERVE—*continued.*

M.—ROYAL NAVAL RESERVE: (WAGES, ALLOWANCES, &c.)		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
Subsistence Allowances for Officers of the Royal Naval Reserve whilst under drill (under Act 24 & 25 Vict. c. 129); viz.:			
130 Lieutenants, at 10 s. a day each - - - - -		2,702 - -	2,702 - -
90 Sub-Lieutenants, out of the 270 allowed, at 7 s. a day each - - - - -			
Annual Retainer to 16,000 Seamen of the Royal Naval Reserve, at 6 l. £. s. d. per man per annum - - - - - 96,000 - -			
Drill Pay at 1 s. 4 d. a day, and Lodging Allowance at 4 d. a day, for 16,000 men - - - - - 37,833 - -		133,333 - -	133,333 - -
Medical Fees for Examination of Men, Targets, Repair of Arms, Stationery, Travelling Expenses of Officers enrolling Men, and of Men to and from Drill, and Miscella- neous Expenses - - - - -		3,000 - -	3,000 - -
Fees to Deputy Registrars of the Royal Naval Reserve for enrolling Men, &c., and for Clerks, Messengers, &c. - - - - -		6,000 - -	4,000 - -
		£. 145,035 - -	143,035 - -

NOTE.—In addition to the Amount provided in the foregoing Vote for the Royal Naval Reserve, amounting to - - - - - £. s. d. 145,035 - -

The following Sums are likewise included in the undermentioned Votes of the Navy Estimates for Expenses on account thereof, viz. :—

	Under Vote.	£. s. d.	
Sea-pay to Officers and Crews of Her Majesty's Ships "Castor," "Brilliant," "Trincomalee," "Dædalus," "Durham," "Eagle," "President," and "Winchester," used as Drill Ships for the Royal Naval Reserve - - - - -	No. 1.	26,056 - -	
Victuals, &c. for ditto - - - - -	No. 2.	9,203 - -	
Ditto for the Royal Naval Reserve when on Drill <i>afloat</i> - - - - -	No. 2.	30,157 - -	
Supplies of Nava Stores for the above Ships - - - - -	No. 10. (Sec. 1.)	800 - -	
Repairs to ditto - - - - -	No. 10. (Sec. 2.)	1,600 - -	
Medical Attendance, Medicines, &c. - - - - -	No. 12.	263 - -	
			68,084 - -
TOTAL CHARGE for the ROYAL NAVAL RESERVE - - - - -		£. 219,119 - -	

Vote 5.

SCIENTIFIC BRANCH.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the EXPENSES of the SCIENTIFIC BRANCH.

Sixty Three Thousand Five Hundred and Sixty-five Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—SALARIES, WAGES, AND ALLOWANCES, ROYAL OBSERVATORY	2,732	2,647	85	—
B.—CONTINGENCIES - - - - - DITTO - - -	2,004	2,085	-	81
C.—OBSERVATORY AT THE CAPE OF GOOD HOPE - - -	1,823	1,779	44	—
D.—MAGNETIC AND METEOROLOGICAL DEPARTMENT - - -	1,090	-	1,090	—
E.—NAUTICAL ALMANACK - - - - -	2,399	2,316	83	—
F.—CHRONOMETERS - - - - -	1,000	1,000	—	—
G.—COMPASS DEPARTMENT - - - - -	762	762	—	—
H.—REWARDS, EXPERIMENTS, &c., FOR SCIENTIFIC PURPOSES	500	500	—	—
I.—DIRECTOR OF EDUCATION FOR THE ADMIRALTY - - -	964	964	—	—
K.—SCHOOL OF NAVAL ARCHITECTURE - - - - -	1,360	1,569	-	209
L.—ROYAL UNITED SERVICE INSTITUTION - - - - -	300	300	—	—
M.—LIBRARIES AND MUSEUMS AT HASLAR AND PLYMOUTH HOSPITALS - - - - -	100	100	—	—
N.—SALARIES, WAGES, AND ALLOWANCES, HYDROGRAPHICAL DEPARTMENT - - - - -	6,042	6,007	35	—
O.—DRAWING, ENGRAVING, PRINTING, AND MOUNTING CHARTS - - - - -	12,000	12,000	—	—
P.—CONTINGENCIES, HYDROGRAPHICAL DEPARTMENT - - -	1,000	1,000	—	—
Q.—COAST AND OTHER SURVEYS (HIRE OF SHIPS, EXTRA PAY, &c.) - - - - -	26,452	29,092	-	2,640
R.—ESTABLISHMENT FOR SCIENTIFIC EDUCATION AT PORTS-MOUTH - - - - -	3,037	2,985	52	—
£.	63,565	65,106	1,389	2,930

NET DECREASE - - - £ 1,541.

III. DETAILS of the above:

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
ROYAL OBSERVATORY:		
Astronomer Royal - - - - -	1,000 - -	1,000 - -
First Assistant to ditto - - - - -	400 - -	400 - -
Second ditto - ditto - - - - -	{ Transferred to Vote for Magnetic, &c. Department, see next page - - }	300 - -
Third ditto - ditto - - - - -		230 - -
Fourth ditto - ditto - - - - -	180 - -	180 - -
Fifth ditto - ditto - - - - -	150 - -	150 - -
Sixth ditto - ditto - - - - -	170 - -	170 - -
Seventh ditto - ditto - - - - -	170 - -	170 - -
Supernumerary Computers - - - - -	320 - -	{ Provided for in 1867- 68 in the Civil Ser- vice Estimates, Class IV. Vote 15, p. 43.
Wages of Labourer, Watchman, and Gate Porter - - -	112 - -	
Labourer - - - - -	- - -	47 - -
A.—SALARIES, WAGES, AND ALLOWANCES, ROYAL OBSERVATORY - - - - -	2,732 - -	2,647 - -

Vote 5.—SCIENTIFIC BRANCH—continued.

	REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
	£.	s.	d.	£.	s.	d.
ROYAL OBSERVATORY—continued.						
Expenses of Board of Visitors - - - - -	70	-	-	70	-	-
Allowances to Assistants in lieu of Houses - - - - -	220	-	-	260	-	-
Taxes, Rates, Fuel, Repairs, and other contingent Expenses	1,000	-	-	1,100	-	-
Galvanic Contingencies - - - - -	100	-	-	100	-	-
Expenses of Signal Time Ball at Deal - - - - -	85	-	-	85	-	-
Maintaining Telegraph Wires from the Royal Observatory to the Greenwich Railway Station - - - - -	25	-	-	—	-	-
Extraordinary Expenses:						
Fire-proofing South East Dome - - - - -	-	-	-	400	-	-
Improvement of Roof of ditto - - - - -	-	-	-	70	-	-
Chronometer Shelves and Oven in South East Dome - - - - -	60	-	-	—	-	-
Partition for Chronometer Office - - - - -	24	-	-	—	-	-
Slate Shelves for Manuscripts - - - - -	34	-	-	—	-	-
Depôt for Observatory Publications - - - - -	120	-	-	—	-	-
Raising the Ceiling of a Room - - - - -	26	-	-	—	-	-
General painting and preliminary repairs - - - - -	191	-	-	—	-	-
Whitewashing, &c. - - - - -	24	-	-	—	-	-
Repairs of Wooden Fences - - - - -	25	-	-	—	-	-
B.—CONTINGENCIES, ROYAL OBSERVATORY - - - - -	2,004	-	-	2,085	-	-
£.	4,736	-	-	4,732	-	-
C.—OBSERVATORY AT THE CAPE OF GOOD HOPE:						
Astronomer - - - - -	600	-	-	600	-	-
First Assistant to ditto - - - - -	400	-	-	400	-	-
Second Assistant to ditto - - - - -	250	-	-	250	-	-
Labourer - - - - -	80	-	-	80	-	-
Clerical Assistance in copying and computing the Meri- dian Work, &c. - - - - -	262	-	-	262	-	-
Incidental Expenses - - - - -	94	-	-	50	-	-
Attending to Simon's Bay Time Ball for Her Majesty's Ships - - - - -	37	-	-	37	-	-
Printing Astronomical Observations - - - - -	100	-	-	100	-	-
£.	1,823	-	-	1,779	-	-
D.—MAGNETIC AND METEOROLOGICAL DEPARTMENT:						
ROYAL OBSERVATORY, GREENWICH:						
Superintendent - - - - -	300	-	-	{ Transferred from Vote for Royal Observatory p. 23. Provided for in 1867-8, in the Civil Service Estimates, Class IV., Vote 15, p. 43.		
Assistant - - - - -	120	-	-			
Supernumerary Computers - - - - -	150	-	-			
Allowance to the Superintendent in lieu of a house - - - - -	40	-	-	{ Transferred from Vote for Royal Observatory above. Provided for in 1867-8, in the Civil Service Es- timates, Class IV., Vote 15, p. 43.		
Repairs of Instruments, New Instruments, and current Expenses of all kinds - - - - -	230	-	-			
OBSERVATORY AT THE CAPE OF GOOD HOPE:						
Two Assistants { One at - - - - -	150	-	-			
{ One at - - - - -	100	-	-			
£.	1,090	-	-	—		

No. 5.—SCIENTIFIC BRANCH—continued.

			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
			£. s. d.	£. s. d.
E.—NAUTICAL ALMANACK:				
Salary of the Superintendent	-	-	500	500
	£. s. d.			
Computers	Chief Assistant, from £. 250 to	300	1,699	1,616
	£. 300 per annum	-		
	3 First Class, from £. 180 to	616		
	£. 230 per annum	-		
	7 Second Class, from £. 70 to	783		
	£. 150 per annum	-		
Rent, &c., for the Office in Verulam Buildings	-	-	100	100
For Sundries	-	-	100	100
	£.		2,399	2,316

Number of Nautical Almanacks sold in the five years ended the 31st December 1867; viz.:

Year.	Number.
1863	20,957
1864	21,234
1865	22,045
1866	21,638
1867	20,969

F.—CHRONOMETERS:				
For the Purchase, Repair, and other Expenses connected with Chronometers	-	-	1,000	1,000
	£.			

G.—COMPASS DEPARTMENT:				
Superintendent of Compasses (in addition to Full Pay and Allowances)	-	-	182	182
Assistant to ditto	-	-	125	125
Rent of Ground	-	-	45	45
Contingent Expenses	-	-	85	85
Purchase and Repair of Standard Compasses	-	-	300	300
Repairs to Compass Observatory	-	-	25	25
	£.		762	762

H.—REWARDS, EXPERIMENTS, &c.:				
Rewards, Experiments, and other Expenses for Scientific Purposes	-	-	500	500
(For Return of Expenditure of 1866-67, see Appendix, No. 9, p. 161).	£.			

I.—DIRECTOR OF EDUCATION FOR THE ADMIRALTY:				
For Salary of the Director of Education for the Admiralty	£. s. d.			
	-	650		
For Commuted Allowance for Subsistence to ditto	-	250		
			900	900
For Travelling Expenses of ditto	-	-	64	64
(Paid in addition for professional attendance at the Science and Art Department of the Committee of Council on Education, South Kensington; the amount not to exceed in a year 250 £.)				
	£.		964	964

No. 5.—SCIENTIFIC BRANCH—*continued.*

				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
				£. s. d.	£. s. d.
K.—SCHOOL OF NAVAL ARCHITECTURE:					
Fees for Students at 25 <i>l.</i> each	-	-	-	650	750
Maintenance of Students at 1 <i>l.</i> 1 <i>s.</i> a week each	-	-	-	710	819
<i>Note.</i> —The amount requisite to make up the deficiency in the cost of the School, which is not supplied by the Fees for the Admiralty and Public Students, is taken in the Votes of the Science and Art Department (Civil Service Estimates).				£. 1,360	1,569
L.—ROYAL UNITED SERVICE INSTITUTION:					
Annual Contribution towards the Funds of the above Institution	-	-	£.	300	300
M.—LIBRARIES AND MUSEUMS AT HASLAR AND PLYMOUTH HOSPITALS:					
For an Outlay on Books and Specimens for the Libraries and Museums at Haslar and Plymouth Hospitals	-	-	£.	100	100
HYDROGRAPHICAL DEPARTMENT:					
Hydrographer *	-	-	-	1,000	1,000
Chief Naval Assistant, and in charge of the Magnetic Department *	-	-	-	500	500
Two Civil Assistants	-	-	-	1,050	1,050
{ One at 600 <i>l.</i> One at 450 <i>l.</i>					
Civil Assistant for Pilotage Duties - from £. 315 to £. 500 a year	-	-	-	338	323
Naval Assistant * (to be borne on Ship's Books on a new appointment)	-	-	-	422	250
Four - ditto - (borne on Ship's Books, and paid Full-pay and Allowances)	-	-	-	-	-
Allowance of 2 <i>s.</i> a day to the Naval Assistant, in addition to his Pay	-	-	-	-	36
Temporary Assistants preparing Sailing Directions	-	-	-	365	365
Superintendent of Charts *	-	-	-	400	400
Draughtsmen at Salaries varying according to Rank and length of Service, viz.:					
	NUMBER.				
	1868/69.	1867/68.			
Chief Draughtsman	1	1	from £. 310 to £. 400 per annum	369	354
1st Class	1	1	" 310 to 350 "	348	337
2nd "	2	2	" 210 to 300 "	481	461
3rd "	1	2	" 150 to 200 "	150	327
	5	6			
Salaries - £.	1,348	1,479			
Extra Draughtsman	-	-	-	150	150
Writer	-	-	-	109	109
Messengers and Packers of Charts:					
1st Class, 1 in No.	-	-	-	120	120
2d Class, 1 in No., from £. 85 to £. 90 a year	-	-	-	90	85
3d Class, 2 in No., from £. 70 to £. 80 "	-	-	-	150	140
N.—SALARIES, WAGES, AND ALLOWANCES, HYDROGRAPHICAL DEPARTMENT -				6,042	6,007
O.—{ Drawing and Engraving Charts - £. 6,000 - - Printing and Mounting Charts - 6,000 - - }				12,000	12,000
P.—Instruments, Repairs, Chart Boxes, &c., Books, and Contingencies -				1,000	1,000
Number of Charts and Books Sold in the Five Years ended the 31st December 1867, and Proceeds of the same, viz.:					
Year.	Charts. No.	Books. No.	Amount Received and Paid over to Exchequer.		
1863	82,099	1,618	£. 5,014 18 3		
1864	119,138	2,248	6,420 9 3		
1865	83,324†	-	4,100 19 9		
1866	99,082†	-	5,186 15 10		
1867	83,619†	-	4,610 2 9		
† <i>Note.</i> —Books accounted for by Her Majesty's Stationery Office.					
Carried forward - - - £.				19,042	19,007

* In addition to Half-pay.

No. 5.—SCIENTIFIC BRANCH—continued.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
HYDROGRAPHICAL DEPARTMENT—continued.		
	£. s. d.	£. s. d.
Brought forward - - -	19,042 - -	19,007 - -
	£. s. d.	
Hire of Vessels and Boats, for Lodging Money, and other Expenses relating to Coast and other Surveys - - - 15,481 - -		
Extra Pay to Surveyors and their Assist- ants on Home Stations - - - 1,702 - -		
Extra Pay to Surveyors and their Assist- ants on Foreign and Colonial Sta- tions - - - - - 9,269 - -		
Q.—COAST AND OTHER SURVEYS (Hire of } Ships, Extra Pay, &c.) - - - } £.	* 26,452 - -	29,092 - -
	£. 45,494 - -	48,099 - -

A moiety of the charges for the Australian Surveys of South Australia, Queensland, and New South Wales, is defrayed by these several Colonies; the remaining moiety is provided for under this Vote. In the case of the Survey of Victoria, the cost of which, it is estimated, will amount to nearly 13,000 *l.*, charges on account thereof to the extent of 2,500 *l.* only, will be borne by Imperial Funds, and are provided for under this Vote.

<i>Note.</i> —In addition to the Amount provided, as above,* under the Hydrographical Department as the Estimated Expense of Surveys, amounting to - - - - -	£. s. d. 26,452 - -
--	------------------------

The following Sums are likewise included in the undermentioned Votes
of the Navy Estimates for Expenses of the Surveying Service, viz.:—

Sea Pay to the Officers and Crews of Her Majesty's Ships and Vessels employed in the Surveying Service; also the Pay of those employed in hired Vessels and Boats, but borne on the Books of Her Majesty's Ships, viz.:— Seamen, &c. - - - £. 29,907 Marines - - - - - 760	Under Vote. —	£. s. d.	
Victuals, &c., for ditto - - -	No. 1	30,667 - -	
	No. 2	7,203 - -	
Stores, Machinery, and Coals sup- plied to Surveying Ships and Vessels, and also Wear and Tear - - - }	No. 6 & No. 10 }	16,944 - -	
Medicines, &c., supplied to ditto -	No. 12	92 - -	
Pilotage of ditto - - - -	No. 14	39 - -	
		54,945 - -	
TOTAL Charge for the Surveying Service - - - £.		81,397 - -	

N.B.—For Statement of the Rates of Surveying Pay and Lodging Money of Surveying Officers of each Rank, see APPENDIX, No. 10, page 161; and Note respecting Surveys in Progress, see APPENDIX, No. 11, page 161.

No. 5.—SCIENTIFIC BRANCH—*continued.*

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
R.—ESTABLISHMENT FOR SCIENTIFIC EDUCATION AT THE ROYAL NAVAL COLLEGE AT PORTSMOUTH:	£. s. d.	£. s. d.
Superintendent (in addition to his Full Pay and Allowances as Captain (2nd Class) of Her Majesty's Ship "Excellent")	258 - -	258 - -
Professor (increase of Salary of 100 <i>l.</i> not to be continued to his successor) - - - - -	600 - -	600 - -
Instructor of Fortification and Military and Mechanical Drawing - - - - -	200 - -	200 - -
Teacher of the Sword Exercise - - - - -	175 - -	175 - -
French Instructor - - - - -	100 - -	100 - -
Clerk, from 170 <i>l.</i> to 200 <i>l.</i> per annum - - - - -	200 - -	200 - -
Allowance to ditto for taking charge of the Books, Furniture, &c., of the Establishment - - - - -	20 - -	20 - -
Assistant in the Observatory - - - - -	120 - -	120 - -
Matron - - - - -	67 - -	70 - -
Wages and Allowances for 5 Female Servants - - - - -	206 - -	206 - -
Lodging Money to the Teacher of the Sword Exercise - - - - -	55 - -	- - -
Rates and Taxes - - - - -	110 - -	110 - -
Lighting the College with Gas - - - - -	75 - -	75 - -
Allowance in lieu of Stationery to the Superintendent - - - - -	16 - -	16 - -
For keeping up Library of Royal Naval College - - - - -	30 - -	30 - -
Expenses for Lecturing on Chemistry and Steam - - - - -	105 - -	105 - -
Furniture, repairing Instruments, washing Linen, Postage, Printing, Coals, and other small Expenses - - - - -	700 - -	700 - -
£.	3,037 - -	2,985 - -

VOTE 6.

DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD.

I.—ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expenses of the DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD.

One Million Two Hundred and Twenty-three Thousand Five Hundred and Sixty-two Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—SALARIES AND ALLOWANCES, DOCKYARDS AT HOME -	141,943	141,086	857	—
B.—RENTS, RATES, TAXES, AND WATER - DITTO - -	6,899	6,798	101	—
C.—LIGHTING WITH GAS - - - - - DITTO - -	9,055	8,990	65	—
D.—CONTINGENCIES - - - - - DITTO - -	4,836	4,836	—	—
E.—WAGES TO ARTIFICERS, &c. - - - - DITTO - -	879,859	1,036,638	-	156,779
F.—DITTO - YARD SERVICE AFLOAT - - DITTO - -	15,637	18,855	-	3,218
G.—HIRE OF TEAMS - - - - - DITTO - -	10,005	9,987	18	—
H.—WAGES, &c., POLICE FORCE - - - - DITTO - -	34,123	32,589	1,534	—
I.—WAGES, ARTIFICERS, AND LABOURERS, BREAKING UP OLD SHIPS - - - - -	15,000	15,000	—	—
K.—WORK IN CONNECTION WITH GUNNERY FITTINGS -	4,000	-	4,000	—
L.—EXTRA PAY TO ARTIFICERS, &c., OF THE FLEET AT HOME - - - - -	4,000	4,000	—	—
M.—SURVEY VALUATION OF STOCK AT THE SEVERAL DOCKYARDS, &c. - - - - -	2,000	1,000	1,000	—
N.—SALARIES AND ALLOWANCES, NAVAL YARDS ABROAD	27,329	26,798	531	—
O.—RENTS, RATES, TAXES, AND WATER, NAVAL YARDS ABROAD - - - - -	2,281	2,402	-	121
P.—LIGHTING WITH GAS, NAVAL YARDS ABROAD - -	550	570	-	20
Q.—CONTINGENCIES - - NAVAL YARDS ABROAD - -	1,190	1,170	20	—
R.—WAGES - - - - - DITTO - - - -	45,846	46,210	-	364
S.—WAGES, YARD SERVICE AFLOAT - DITTO - - -	4,121	4,133	-	12
T.—HIRE OF TEAMS - - - - - DITTO - - -	—	—	—	—
U.—WAGES, POLICE FORCE - - - - - DITTO - - -	5,888	5,306	582	—
V.—EXTRA PAY TO ARTIFICERS, &c., OF THE FLEET, ABROAD - - - - -	9,000	9,000	—	—
£.	1,223,562	1,375,368	8,708	160,514

NET DECREASE - - £.151,806.

6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

III.

DETAILS of the foregoing.

DOCKYARDS AT HOME.				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
DEPTFORD :					
SALARIED ESTABLISHMENT :					
Superintendent:				£. s. d.	£. s. d.
Addition to his salary as Superintendent of the Victualling Yard, the Dock- yard also being placed under his control (<i>see</i> page 63)	-	-	-	100 - -	100 - -
Master Attendant and Harbour Master (<i>see</i> Victualling Yard, page 63)	-	-	-	-	-
Foreman of Sailmakers	-	-	-	160 - -	160 - -
Master Shipwright	-	-	-	500 - -	500 - -
Timber Inspector	-	-	-	300 - -	300 - -
Boatswain	-	-	-	190 - -	190 - -
Two Foremen of the Yard, at 250 l. each	-	-	-	500 - -	500 - -
<i>Gratuity to one of the above</i>	-	-	-	-	50 - -
Converter of Timber	-	-	-	150 - -	150 - -
Foreman of Smiths	-	-	-	150 - -	150 - -
Six Inspectors	{ Two at	-	£. 150	800 - -	800 - -
	{ Four at	-	125		
Storekeeper and Cashier	-	-	-	600 - -	600 - -
Foreman of Storehouses	-	-	-	120 - -	120 - -
Ditto	-	-	£. 120	-	-
Addition to Salary for duties at Admiralty, Somerset House	-	-	100	220 - -	220 - -
Clerk of Works	-	-	from 190 l. to 300 l. per annum	300 - -	300 - -
Clerk and Draughtsman	-	-	„ 90 l. to 300 l. „ „	190 - -	180 - -
Foreman of Works	-	-	„ 120 l. to 180 l. „ „	180 - -	180 - -
Staff Surgeon	-	-	-	495 - -	450 - -
Allowance to ditto for Servants, Fuel, and Lights	-	-	-	53 - -	-
Schoolmaster, for the Instruction of Apprentices in the Dockyard, from 150 l. to 200 l. per annum	-	-	-	200 - -	200 - -
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz. :					
	NUMBER.				
	1868/69.	1867/68.			
Senior Clerk	1	1	from 315 l. to 450 l. per annum	329 - -	450 - -
Clerks	9	9	„ 90 l. to 300 l. ditto	1,705 - -	2,032 - -
	10	10			
Salaries - - £.	2,034	2,482			
Temporary employment of Writers	-	-	-	344 - -	258 - -
(Total Salaries, exclusive of Accountant's Department, 7,586 l.)					
ACCOUNTANT'S DEPARTMENT :					
Accountant of the Dock and Victualling Yards	-	-	£. 500	600 - -	600 - -
Addition to ditto, to make up his previous Salary as Storekeeper of the Victualling Yard	-	-	100		
Inspector of Stores	-	-	-	450 - -	450 - -
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz. :					
	NUMBER.				
	1868/69.	1867/68.			
Senior Clerk	1	1	from 315 l. to 450 l. per annum	375 - -	360 - -
Clerks	3	2	from 90 l. to 300 l. ditto	455 - -	298 - -
	4	3			
Salaries - - £.	830	658			
Temporary employment of Clerks and Writers	-	-	-	220 - -	297 - -
(Total Salaries of Accountant's Department, 2,100 l.)					
A.—SALARIES AND ALLOWANCES, DOCKYARDS } (Carried forward) - - - £.				9,686 - -	9,895 - -
AT HOME - - - - - }					

No. 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

DOCKYARDS AT HOME—continued.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
DEPTFORD—continued.			
Salaried Establishment—continued.		£. s. d.	£. s. d.
Brought forward - - -		9,686 - -	9,895 - -
Rent of part of Dockyard - - - - -		10 - -	10 - -
Rates and Taxes - - - - -		230 - -	230 - -
Rent of Water - - - - -		125 - -	125 - -
B.—RENTS, RATES, TAXES AND WATER, DOCKYARDS AT HOME - - -	£.	365 - -	365 - -
C.—Lighting the Yard with Gas - - - - -	£.	450 - -	300 - -
Allowances in lieu of Stationery :			
To the Captain Superintendent - - - - -	£. 10	69 - -	69 - -
„ Master Attendant - - - - -	4		
„ Master Shipwright - - - - -	15		
„ Storekeeper and Cashier - - - - -	25		
„ Accountant - - - - -	15		
Postage and Travelling Charges on the Public Service, Printing, Advertisements, and other small Expenses - - - - -		200 - -	200 - -
D.—CONTINGENCIES, DOCKYARDS AT HOME - - - - -	£.	269 - -	269 - -
TOTAL SALARIED ESTABLISHMENT - - -	£.	10,770 - -	10,829 - -
W A G E S :			
DOCKYARD :			
For the Wages of Shipwrights, other Artificers, and Labourers, viz. :			
	Number of Men.		
	1868/69.	1867/68.	
On the Establishment - - - - -	505	502	} 33,947 - - 33,721 - -
Hired Labourers, 1st Class (entitled to Pensions) - - -	26	28	
	531	530	
For the Wages of Hired Artificers and Labourers - - -	91	311	3,323 - - 14,158 - -
TOTAL, Established and Hired - - -	622	841	37,270 - - 47,879 - -
For the Wages of Persons employed for Yard Service Afloat, in Steam Tugs, Hoys, &c. - - - - -		301 - -	302 - -
For the Hire of Teams - - - - -		798 - -	605 - -
For the Wages, &c., of the Metropolitan Police Force employed in the Dockyard, under 23 & 24 Vict. c. 135 (including Commutation for Clothing, Fuel and Con- tingent Expenses at 3 s. per man per week, and for General Superintendence at 3 s. 4 d. per man per month) :			
1 Chief Inspector - - - - -	£. 137 - -		
4 Serjeants - - - - -	324 - -		
15 Constables - - - - -	1,028 - -		
20		1,489 - -	1,428 - -
TOTAL WAGES - - -	£.	39,858 - -	50,214 - -
TOTAL DEPTFORD DOCKYARD - - -	£.	50,628 - -	61,043 - -

No. 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
WOOLWICH:			
SALARIED ESTABLISHMENT:			
Commodore Superintendent:			
Sea Pay and Allowances as Captain of the 1st Class, viz.:			
Sea Pay as Captain of the 1st Class, at 1 l. 12 s. 11 d. a day	£. 600 14 7		
Command Money	91 5 -		
Allowance in lieu of Provisions, at 1 s. 6 d. a day	27 7 6		
Ditto, for Fuel and Lights, at 1 l. a month	13 - -		
Civil Allowance	517 12 11	1,250 - -	1,250 - -
Retinue of Commodore Superintendent:			
Coxswain and Three Domestics	£. 126 4 7		
Allowance in lieu of Provisions to ditto, four at 1 s. 6 d. a day each	109 15 5	236 - -	236 - -
Master Attendant	- - - - -	600 - -	600 - -
Foreman of Riggers	- - - - -	190 - -	190 - -
Master Shipwright	- - - - -	650 - -	650 - -
Assistant to ditto	- - - - -	400 - -	400 - -
Timber Inspector	- - - - -	400 - -	400 - -
Boatswain	- - - - -	220 - -	220 - -
Master Smith	- - - - -	250 - -	250 - -
Four Foremen of the Yard, at 250 l. a year each	- - - - -	1,000 - -	1,000 - -
Gratuity to one of the above	- - - - -	50 - -	50 - -
One Foreman of the Yard (to superintend the Joiners)	- - - - -	180 - -	180 - -
Converter of Timber	- - - - -	150 - -	150 - -
Foreman of Smiths	- - - - -	125 - -	125 - -
Eleven Inspectors	- - - - - { Four at £. 150 Seven at 125 }	1,475 - -	1,600 - -
Chief Engineer and Inspector of Machinery	- - - - -	650 - -	650 - -
Assistant to ditto	- - - - -	400 - -	400 - -
Foreman of the Factory	- - - - -	225 - -	225 - -
Foreman of the Boilermakers	- - - - -	200 - -	200 - -
Storekeeper	- - - - -	600 - -	600 - -
Foreman of Storehouses	- - - - -	120 - -	120 - -
Cashier	- - - - -	450 - -	450 - -
Timekeeper at Steam Factory	- - - - -	120 - -	120 - -
Clerk of the Works, from 190 l. to 300 l. per annum	- - - - -	300 - -	300 - -
Clerk and Draughtsman, from 90 l. to 300 l. per annum	- - - - -	250 - -	240 - -
Foreman of Works, from 120 l. to 180 l. per annum	- - - - -	177 - -	167 - -
Staff Surgeon	- - - - -	493 - -	500 - -
Allowance to Ditto for Servants, Fuel, and Lights	- - - - -	53 - -	- - -
Chaplain*	- - - - -	350 - -	350 - -
(For additional Salary of 100 l. a year, see Woolwich Marine Infirmary, page 83).			
Schoolmaster, for the instruction of Apprentices in the Yard, from 150 l. to 200 l. per annum	- - - - -	167 - -	200 - -
Carried forward		£. 11,731 - -	11,823 - -

* In addition to Half-pay.

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*DOCKYARDS AT HOME—*continued.*WOOLWICH—*continued.*Salaried Establishment—*continued.*

Brought forward - - - £.

Gratuity to Schoolmaster for the Instruction of Naval Engineers - - - - -
 Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:—

NUMBER.	
1868/69.	1867/68.
3	3
14	13
17	16
3,879	3,629

Senior Clerks - - - from £. 315 to £. 450 per annum -

Clerks - - - " 90 to 300 " -

Salaries - - £.

Temporary employment of Clerks and Writers - - - - -

Additional Day's Pay to ditto for Leap Year - - - - -

(TOTAL Salaries, exclusive of Accountant's Department, £. 16,736)

ACCOUNTANT'S DEPARTMENT:

Accountant - - - - -

Inspector of Stores - - - - -

Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:

NUMBER.	
1868/69.	1867/68.
1	1
4	4
5	5
1,107	1,072

Senior Clerk - - - from £. 315 to £. 450 per annum -

Clerks - - - " 90 to 300 " -

Salaries - - £.

Temporary employment of Clerks and Writers - - - - -

(TOTAL Salaries of the Accountant's Department, £. 2,606)

A.—SALARIES AND ALLOWANCES, DOCKYARDS AT HOME - £.

Allowances for House Rent: £. s. d.

Assistant to the Chief Engineer and Inspector of Machinery - 50 - -

(Not to be continued to his successor.)

To the Accountant - - - - - 100 - -

" Chaplain - - - - - 50 - -

" Assistant Surgeon of H. M. S. "Fisgard" - - - - - 40 - -

" Clerk to Superintendent - - - - - 70 - -

" Clerk of Works - - - - - 50 - -

Rates and Taxes - - - - -

Rent of Water - - - - -

B.—RENTS, RATES, TAXES, AND WATER, DOCKYARDS AT HOME - £.

C.—Lighting the Yard and Steam Factory with Gas - - - - - £.

Carried forward - - - £.

REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
£.	s.	d.	£.	s.	d.
11,731	-	-	11,823	-	-
30	-	-	30	-	-
1,275	-	-	1,245	-	-
2,604	-	-	2,384	-	-
1,096	-	-	1,096	-	-
-	-	-	4	-	-
500	-	-	500	-	-
300	-	-	300	-	-
430	-	-	415	-	-
677	-	-	657	-	-
699	-	-	709	-	-
19,342	-	-	19,163	-	-
360	-	-	385	-	-
324	-	-	324	-	-
375	-	-	375	-	-
1,059	-	-	1,084	-	-
1,650	-	-	1,650	-	-
22,051	-	-	21,897	-	-

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

DOCKYARDS AT HOME—continued.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
WOOLWICH—continued.			
Salaried Establishment—continued.		£. s. d.	£. s. d.
Brought forward - - - £.		22,051 - -	21,897 - -
Allowances in lieu of Stationery--			
To the Commodore Superintendent - - - - - £. 35			
" Master Attendant - - - - - 12			
" Master Shipwright - - - - - 20			
" Chief Engineer - - - - - 15		142 - -	142 - -
" Storekeeper - - - - - 25			
" Accountant - - - - - 20			
" Cashier - - - - - 15			
Postage, Travelling Charges on the Public Service, Advertisements, Chapel Allowances, and small Expenses - - - - -		550 - -	550 - -
D.—CONTINGENCIES, DOCKYARDS AT HOME - - - - -		692 - -	692 - -
TOTAL SALARIED ESTABLISHMENT - - - - -		22,743 - -	22,589 - -
WAGES:			
DOCKYARD:			
For the Wages of Shipwrights, other Artificers and Labourers, viz.:			
	Number of Men.		
	1868/69.	1867/68.	
On the Establishment - - - - -	1,036	1,029	} 71,555 - - 70,875 - -
Hired Labourers, 1st Class (entitled to Pensions) - - -	68	74	
	1,104	1,103	
For the Wages of Hired Artificers and Labourers - - -	231	644	8,292 - - 33,101 - -
STEAM FACTORY:			
For the Wages of Artificers and Labourers employed in the Steam Factory - - - - -	659	733	40,530 - - 45,030 - -
	1,994	2,480	120,377 - - 149,006 - -
For the Wages of Persons employed for Yard Service Afloat, in Steam Tugs, Hoys, &c. - - - - -		2,142 - -	2,748 - -
For the Hire of Teams - - - - -		826 - -	826 - -
For the Wages of the Metropolitan Police Force employed in the Dockyard, under 23 & 24 Vict. c. 135 (including commutation for Clothing, Fuel, and Contingent Expenses, at 3 s. per Man per Week, and for General Superintendence at 3 s. 4 d. per Man per Month).			
1 Superintendent - - - - - £. 225 - -			
2 Inspectors - - - - - 274 - -			
10 Serjeants - - - - - 809 - -			
32 Constables - - - - - 2,194 - -		3,502 - -	3,394 - -
45			
TOTAL WAGES - - - £.		126,847 - -	155,974 - -
TOTAL WOOLWICH DOCKYARD - - - £.		149,590 - -	178,563 - -

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867-68.
CHATHAM:		£. s. d.	£. s. d.
SALARIED ESTABLISHMENT.			
Captain Superintendent:			
Sea Pay and Allowances as Captain of the 1st Class, viz.:			
Sea Pay, at 1 l. 12 s. 11 d. a day	£. 600 14 7		
Command Money	91 5 -		
Allowance in lieu of Provisions, at 1 s. 6 d. a day	27 7 6		
Allowance for Fuel and Lights, at 1 l. a month	13 - -		
Civil Allowance	517 12 11		
		1,250 - -	1,250 - -
Retinue of Captain Superintendent:			
Three Domestics	£. 87 - -		
Allowance in lieu of Provisions to ditto, Three at 1 s. 6 d. a day each	82 - -		
		169 - -	169 - -
Master Attendant and Harbour Master -		600 - -	600 - -
Foreman of Spinning Machines -		200 - -	200 - -
Foreman of Sailmakers -		160 - -	160 - -
Foreman of Ropemakers -		200 - -	200 - -
Foreman of Riggers -		190 - -	190 - -
Two Layers in the Ropeyard, at 100 l. each		200 - -	200 - -
Master Shipwright -		650 - -	650 - -
Two Assistants to ditto, at 400 l. each		800 - -	800 - -
Timber Inspector -		400 - -	400 - -
Boatswain -		220 - -	220 - -
Master Smith -		250 - -	250 - -
Five Foremen of the Yard, at 250 l. each		1,250 - -	1,250 - -
Gratuity to one of the above		50 - -	50 - -
Foreman of the Yard (to superintend the Joiners)		180 - -	180 - -
Converter of Timber		150 - -	150 - -
Two Foremen of Smiths, at 125 l. each		250 - -	125 - -
Foreman of Painters		200 - -	
Eleven Inspectors -	{ Two at £. 150 each Nine at 125 each }	1,425 - -	1,300 - -
Chief Engineer and Inspector of Machinery -		650 - -	650 - -
Conductor of Metal Mills -		300 - -	300 - -
Storekeeper -		600 - -	600 - -
Foreman of Storehouses		120 - -	120 - -
Cashier -		500 - -	500 - -
Assistant Civil Engineer, from 315 l. to 500 l. per annum		£. 450	
Allowance to ditto for Special Duties connected with the extension of the Dockyard by Convict Labour, 105 l.; of which sum 55 l. is provided under Vote No. 11, New Works, &c.	50	500 - -	485 - -
Clerk of the Works, from 190 l. to 300 l. per annum		300 - -	300 - -
Clerk and Draughtsman, from 90 l. to 300 l. per annum		190 - -	180 - -
Foreman of the Works, from 120 l. to 180 l. per annum		180 - -	180 - -
Staff Surgeon -		493 - -	500 - -
Assisting Surgeon -		416 - -	300 - -
Allowances to ditto for Servants, Fuel, and Lights		106 - -	
Chaplain* -		350 - -	350 - -
Carried forward		£. 13,499 - -	12,809 - -

* In addition to Half-pay.

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*DOCKYARDS AT HOME—*continued.*CHATHAM—*continued.*Saluried Establishment—*continued.*

Brought forward - - - £.

Head Master of the Dockyard School, for instruction of Apprentices in the Yard,
 from 200 *l.* to 250 *l.* per annum - - - - -
 Allowance to ditto, for teaching the Junior Engineers - - - - -
 Assistant to ditto, from 100 *l.* to 140 *l.* per annum - - - - -

Clerks on the Establishment, at Salaries varying according to Rank and Length of
 Service, viz. :

		NUMBER.			REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
		1868/69.	1867/68.		£.	s.	d.	£.	s.	d.
Senior Clerks	-	3	3	from £. 315 to £. 450 per annum	1,239	-	-	1,209	-	-
Clerks	- - -	12	11	„ 90 to 300 „	2,841	-	-	2,483	-	-
		15	14							
Salaries	- £.	4,080	3,692							
Temporary employment of Clerks and Writers	- - - - -				924	-	-	1,178	-	-
Additional Day's Pay to ditto for Leap Year	- - - - -				-			5	-	-
(TOTAL Salaries, exclusive of Accountant's Department, £. 18,878.)										

ACCOUNTANT'S DEPARTMENT :

Accountant	- - - - -	600	-	-	600	-	-
Inspector of Stores	- - - - -	350	-	-	350	-	-

Clerks on the Establishment, at Salaries varying according to Rank and Length
 of Service ; viz. :

		NUMBER.			REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
		1868/69.	1867/68.		£.	s.	d.	£.	s.	d.
Senior Clerk	-	1	1	from £. 315 to £. 450 per annum	362	-	-	347	-	-
Clerks	- -	5	5	„ £. 90 to £. 300 „	764	-	-	886	-	-
		6	6							
Salaries	- £.	1,126	1,233							
Temporary employment of Clerks and Writers	- - - - -				694	-	-	704	-	-
(TOTAL Salaries of Accountant's Department, £. 2,770).										

A.—SALARIES AND ALLOWANCES, DOCKYARDS AT HOME - - - £. 21,648 - - 20,946 - -

Allowances for House Rent :

To the Chaplain	-	-	-	-	-	£. 50	-	-			
To the Assistant Civil Engineer	-	-	-	-	-	75	-	-			
To the Clerk of Works	-	-	-	-	-	65	-	-			
To the Conductor of Metal Mills	-	-	-	-	-	50	-	-			
									240	-	-
										254	-

Rates and Taxes - - - - - 320 - - 320 - -

B.—RENTS, RATES, TAXES, AND WATER, DOCKYARDS AT HOME - - £. 560 - - 574 - -

C—Lighting the Yard with Gas - - - - - £. 1,450 - - 1,400 - -

Carried forward - - - £. 23,658 - - 22,920 - -

DOCKYARDS AT HOME—*continued.*

Salaried Establishment—continued.

Brought forward - - -

Allowances in lieu of Stationery—

[illegible]

Postage, Travelling Charges on the Public Service, Advertisements, Chapel Allowances, regulating Yard Clock, and other small Expenses	-	-	-	-
---	---	---	---	---

D.—CONTINGENCIES, DOCKYARDS AT HOME	•	•	•	•	•	£
-------------------------------------	---	---	---	---	---	---

TOTAL SALARIED ESTABLISHMENT £.

WAGES:

DOCKYARD:

For the Wages of Shipwrights, other Artificers, and Labourers, viz.:

		Number of Men.					
		1868/69.	1867/68.				
On the Establishment	- - - - -	1,440	1,470	} 97,606	- -	98,699	- -
Hired Labourers, 1st Class (entitled to Pensions)	- -	52	61				
Wages to Hired Artificers and Labourers	- - -	1,492 1,639	1,531 1,740	80,196	- -	83,391	- -
TOTAL Established and Hired		3,131	3,271	177,802	- -	182,090	- -
For the Wages of Persons employed for Yard Service Afloat, in Steam Tugs, Hoys, &c.				2,155	- -	2,561	- -
For the Hire of Teams				1,525	- -	1,700	- -
For the Wages of the Metropolitan Police Force employed in the Dockyard, under 23 & 24 Vict. c. 135 (including commutation for Clothing, Fuel, and Contingent Expenses, at 3 s. per Man per Week, and for General Superintendence at 3 s. 4 d. per Man per month):							
1 Superintendent	- - - - -	£. 270	- -	4,856	- -	4,623	- -
3 Inspectors	- - - - -	411	- -				
5 Serjeants	- - - - -	405	- -				
55 Constables	- - - - -	3,770	- -				
64							
TOTAL WAGES				186,338	- -	190,974	- -
TOTAL CHATHAM DOCKYARD				210,531	- -	214,429	- -

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
SHEERNESS:		£. s. d.	£. s. d.
SALARIED ESTABLISHMENT:			
Captain Superintendent:			
Sea Pay and Allowances as a Captain of the 1st Class, viz.:			
Sea Pay at 1 l. 12 s. 11 d. a day	£. 600 14 7		
Command Money	91 5 -		
Allowance in lieu of Provisions at 1 s. 6 d. a day	27 7 6		
Allowance for Fuel and Lights at £. 1 a month	13 - -		
Civil Allowance	267 12 11	1,000 - -	1,000 - -
Retinue of Captain Superintendent:			
Coxswain and three Domestics	£. 126 4 7		
Allowance in lieu of Provisions to ditto, four at 1 s. 6 d. a day each	109 15 5	236 - -	236 - -
Master Attendant and Harbour Master		600 - -	600 - -
Assistant to ditto	500 - -	500 - -	500 - -
Master Rigger	220 - -	220 - -	220 - -
Foreman of Sailmakers	180 - -	180 - -	180 - -
Master Shipwright		600 - -	600 - -
Assistant to ditto	400 - -	400 - -	400 - -
Timber Inspector	300 - -	300 - -	300 - -
Boatswain	220 - -	220 - -	220 - -
Master Smith	250 - -	250 - -	250 - -
Four Foremen of the Yard at 250 l. each	1,000 - -	1,000 - -	1,000 - -
Gratuity to one of the above	50 - -	50 - -	50 - -
Foreman of the Yard (to superintend the Joiners)	180 - -	180 - -	180 - -
Foreman of Caulkers	180 - -	180 - -	180 - -
Foreman of Smiths	125 - -	125 - -	125 - -
Ten Inspectors	One at £. 170 One at 150 Eight at 125 each	1,320 - -	1,345 - -
Engineer		500 - -	550 - -
Foreman of the Factory, from 185 l. to 225 l. per annum	225 - -	225 - -	225 - -
Foreman of Boilermakers	200 - -	200 - -	200 - -
(Increase of Salary of 20 l. not to be continued to successor.)			
Storekeeper		600 - -	600 - -
Foreman of Storehouses	120 - -	120 - -	120 - -
Cashier		500 - -	500 - -
Timekeeper at Steam Factory	120 - -	120 - -	120 - -
Clerk of Works, from 190 l. to 300 l. per annum		300 - -	300 - -
Clerk and Draughtsman, 90 l. to 300 l. per annum	240 - -		
Foreman of Works, from 120 l. to 180 l. "	180 - -	180 - -	180 - -
Staff Surgeon		530 - -	500 - -
Allowance to ditto for Servants, Fuel, and Lights	53 - -		
Chaplain*		350 - -	350 - -
Schoolmaster, for the instruction of Apprentices in the Yard, from 150 l. to 200 l.		188 - -	157 - -
Carried forward		11,467 - -	11,188 - -

* In addition to Half-Pay.

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

DOCKYARDS AT HOME—continued.

SHEERNESS—continued.

Salaried Establishment—continued.

Brought forward

Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:

NUMBER.			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
1868/69.	1867/68.			
Senior Clerks -	3	3	from £. 315 to £. 450 per annum -	1,209 - -
Clerks -	10	11	„ 90 to 300 : „ -	1,418 - -
	13	14		
Salaries - - £.	2,627	2,702		
Temporary Employment of Clerks and Writers	-	-	1,431 - -	1,405 - -
Additional Day's Pay to ditto for Leap Year	-	-	-	7 - -
(TOTAL Salaries, exclusive of Accountant's Department, £. 15,525.)				

ACCOUNTANT'S DEPARTMENT:

Accountant	-	-	450 - -	450 - -
Inspector of Stores -	-	-	300 - -	300 - -
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:				

NUMBER.			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
1868/69.	1867/68.			
Senior Clerk	1	1	from £. 315 to £. 450 per annum -	362 - -
Clerks -	2	2	from £. 90 to £. 300 per annum -	288 - -
	3	3		
Salaries - £.	650	615		

Temporary Employment of Writers	-	-	869 - -	955 - -
---------------------------------	---	---	---------	---------

(TOTAL Salaries of Accountant's Department, £. 2,269.)

A.—SALARIES AND ALLOWANCES, DOCKYARDS AT HOME	-	-	£. 17,794 - -	17,622 - -
---	---	---	---------------	------------

Allowance for House Rent to the Engineer	-	-	75 - -	-
Rates and Taxes	-	-	560 - -	525 - -

B.—RENTS, RATES, TAXES, and WATER, DOCKYARDS AT HOME	-	-	£. 635 - -	525 - -
--	---	---	------------	---------

C.—Lighting the Yard and Steam Factory with Gas	-	-	£. 700 - -	700 - -
---	---	---	------------	---------

Allowance to Roman Catholic Priest	-	-	120 - -	120 - -
------------------------------------	---	---	---------	---------

Allowances in lieu of Stationery:

To the Captain Superintendent	-	-	£. 35	137 - -
„ Master Attendant	-	-	12	
„ Master Shipwright	-	-	20	
„ Engineer	-	-	10	
„ Storekeeper	-	-	25	
„ Accountant	-	-	20	
„ Cashier	-	-	15	

Postage, Travelling Charges on the Public Service, Advertisements, Chapel Allowances, and other small Expenses	-	-	400 - -	400 - -
--	---	---	---------	---------

D.—CONTINGENCIES, DOCKYARDS AT HOME	-	-	£. 657 - -	657 - -
-------------------------------------	---	---	------------	---------

TOTAL SALARIED ESTABLISHMENT (carried forward)	-	-	£. 19,786 - -	19,504 - -
--	---	---	---------------	------------

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME.— <i>continued.</i>			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
SHEERNESS— <i>continued.</i>			£. s. d.	£. s. d.
Brought forward - - -			19,786 - -	19,504 - -
WAGES:				
DOCKYARD:				
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:—				
		Number of Men.		
		1868-69.	1867-68.	
On the Establishment - - - - -		1,056	1,046	70,586 - -
Hired Labourers, 1st Class (entitled to Pensions) -		16	25	
		1,072	1,071	
For the Wages of Hired Artificers and Labourers - -		97	221	3,490 - -
STEAM FACTORY:				
For the Wages of Artificers and Labourers employed in the Steam Factory - - - - -		502	583	31,277 - -
TOTAL Established and Hired - - -		1,671	1,875	105,353 - -
For the Wages of Persons employed for Yard Service Afloat, in Steam Tugs, Hoys, &c. - - - - -			2,697 - -	3,330 - -
For the Hire of Teams - - - - -			955 - -	955 - -
For the Wages of the Metropolitan Police Force employed in the Dockyard, under Act 23 & 24 Vict, c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses, at 3 s. per Man per Week, and for General Superintendence at 3 s. 4 d. per Man per Month):—				
4 Inspectors - - - - -		£. 548 - -		
5 Serjeants - - - - -		405 - -		
38 Constables - - - - -		2,605 - -		
			3,558 - -	2,962 - -
47				
TOTAL WAGES - - - £.			112,563 - -	121,741 - -
TOTAL SHEERNESS DOCKYARD - - - £.			132,349 - -	141,245 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PORTSMOUTH.			
SALARIED ESTABLISHMENT.		£. s. d.	£. s. d.
Admiral Superintendent:			
Sea Pay and Allowances as a Rear-Admiral, viz.:			
Sea Pay at 3 l. a day	£. 1,095 - -		
Table Money at 1 l. 10 s. a day	547 10 -		
Allowance in lieu of Provisions, at 1 s. 6 d. a day	27 10 -		
Ditto for Fuel and Lights, at 1 l. per month	13 - -		
		1,683 - -	1,683 - -
Flag Lieutenant to Admiral Superintendent:			
Sea Pay at 10 s. a day	£. 182 10 -		
Lodging Allowance	50 - -		
Allowance in lieu of Provisions, &c., at 2 s. a day	36 10 -	269 - -	269 - -
Retinue of Admiral Superintendent:			
Coxswain and five Domestics	£. 188 11 8		
Allowances in lieu of Provisions to ditto—six at 1 s. 6 d. a day each	164 8 4	353 - -	353 - -
Master Attendant and Harbour Master		600 - -	600 - -
Assistant to ditto		500 - -	500 - -
Master Sailmaker		200 - -	200 - -
Master Rigger		220 - -	220 - -
Master Ropemaker		—	250 - -
Foreman of Ropemakers		—	200 - -
Layer in the Rope Yard		—	100 - -
Temporary ditto (in charge of Hired Men)		—	100 - -
Master Shipwright (Increase of salary of 50 l. not to be continued to successor)		700 - -	650 - -
Two Assistants to ditto, at 400 l. each		800 - -	800 - -
Timber Inspector		400 - -	400 - -
Boatswain		220 - -	220 - -
Master Smith		250 - -	250 - -
Seven Foremen of the Yard, at 250 l. each		1,750 - -	1,750 - -
Gratuity to one of the above		50 - -	50 - -
Foreman of the Yard (to superintend the Joiners)		180 - -	180 - -
Foreman of Caulkers		180 - -	180 - -
Two Converters of Timber	{ First - £. 150 Second 125 One at 150 One at 125 Three at 150 Fourteen at 125 each }	275 - -	275 - -
Two Foremen of Smiths		275 - -	275 - -
Seventeen Inspectors		2,200 - -	2,200 - -
Chief Engineer and Inspector of Machinery		650 - -	650 - -
Assistant to ditto		400 - -	500 - -
Assistant Inspector of Steam Machinery		250 - -	300 - -
Foreman of the Factory, from 185 l. to 225 l. per annum		215 - -	205 - -
Foreman of Boilermakers		200 - -	200 - -
Foreman of Fitters, from 180 l. to 200 l. per annum		200 - -	200 - -
Storekeeper		600 - -	595 - -
Two Foremen of Storehouses, at 120 l. each		240 - -	240 - -
Cashier		500 - -	500 - -
Timekeeper at the Steam Factory		120 - -	120 - -
Superintending Civil Engineer, from 315 l. to 500 l. per annum		£. 500	
Allowance to ditto for special duties, in addition to 100 l. per annum provided under Vote No. 11 New Works, &c. (Extension Works)	100	600 - -	600 - -
Clerk and Accountant, from 90 l. to 300 l. per annum		130 - -	130 - -
Clerk and Draughtsman, from 90 l. to 300 l. per annum		280 - -	270 - -
Foreman of Works, from 120 l. to 180 l. per annum	£. 180		
Allowance to ditto, whilst employed as Temporary Clerk of the Works	40	220 - -	220 - -
Three Foremen of Works, from 120 l. to 180 l. per annum		473 - -	463 - -
Carried forward		16,183 - -	16,898 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME—continued.				REQUIRED for the Service of the Year 1868/69.		LAST VOTE for the Financial Year 1867/68.	
PORTSMOUTH—continued.							
Salaried Establishment—continued.							
Brought forward - - -				£.	s. d.	£.	s. d.
				16,183	- -	16,898	- -
Staff Surgeon - - - - -				493	- -	500	- -
Assisting Surgeon - - - - -				402	- -	300	- -
Allowances to ditto for Servants, Fuel, and Lights - - - - -				106	- -		- -
Chaplain* - - - - -				350	- -	350	- -
Admiralty Chemist (increase of Salary of 50 <i>l.</i> not to be continued to Successor), - - - - -			£. 400 - -				
Allowance to ditto, for lecturing on Chemistry, &c. to Naval Engineers - - - - -			25 - -				
				425	- -	425	- -
Assistant to Chemist, 200 <i>l.</i> to 300 <i>l.</i> per annum - - - - -				230	- -	215	- -
Head Master of the Dockyard School, for the instruction of Apprentices in the Yard, from 200 <i>l.</i> to 250 <i>l.</i> per annum - - - - -				260	- -	250	- -
Gratuity to ditto, for the instruction of Naval Engineers - - - - -				50	- -	50	- -
Assistant to ditto, from 100 <i>l.</i> to 140 <i>l.</i> per annum - - - - -				105	- -	105	- -
Gratuity to ditto, for attending to the instruction of Engineer Students - - - - -				30	- -	30	- -
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz. :—							
Senior Clerks - - - - -	4	4	from 315 <i>l.</i> to 450 <i>l.</i> per annum - -	1,680	- -	1,619	- -
Clerks - - - - -	19	20	„ 90 <i>l.</i> to 300 <i>l.</i> „ - -	3,695	- -	3,663	- -
	23	24					
Salaries - £.	5,375	5,282					
Temporary Employment of Clerks and Writers - - - - -				2,087	- -	1,949	- -
Additional Day's Pay to ditto for Leap Year - - - - -						10	- -
(TOTAL Salaries, exclusive of Accountant's Department, £. 26,096.)							
ACCOUNTANT'S DEPARTMENT.							
Accountant - - - - -				550	- -	550	- -
Inspector of Stores - - - - -				350	- -	350	- -
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz. :							
Clerks - - - - -	9	9	„ 90 <i>l.</i> to 300 <i>l.</i> per annum - -	1,956	- -	1,906	- -
Salaries - £.	1,956	1,906					
Temporary Employment of Clerks and Writers - - - - -				1,237	- -	1,142	- -
(TOTAL Salaries of the Accountant's Department, £. 4,093.)							
A.—SALARIES and ALLOWANCES, DOCKYARDS AT HOME - - - - - £.				30,189	- -	30,312	- -
Allowances for House Rent—							
To the Chaplain - - - - -			£. 70 - -				
„ Master Ropemaker - - - - -			50 - -				
„ Assistant Inspector of Steam Machinery - - - - -			35 - -				
				155	- -	195	- -
Rent of Corporation Mud Lands - - - - -				20	- -	20	- -
Rates and Taxes - - - - -				690	- -	650	- -
Water supplied for Dockyard - - - - -				1,200	- -	1,200	- -
B.—RENTS, RATES, TAXES, and WATER, DOCK YARDS AT HOME - - - £.				2,065	- -	2,065	- -
Carried forward - - - £.				32,254	- -	32,377	- -

* In addition to Half-pay.

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*DOCKYARDS AT HOME—*continued.*PORTSMOUTH—*continued.*Salaried Establishment—*continued.*

		REQUIRED for the Service of the Year 1868/69.		LAST VOTE for the Financial Year 1867/68.	
		£.	s. d.	£.	s. d.
Brought forward - - -		32,254	- -	32,377	- -
C.—Lighting the Yard, Steam Factory, and Gun Boat Slips at Haslar with Gas -		2,275	- -	2,230	- -
Allowance to Roman Catholic Priest - - - - -		120	- -	120	- -
Allowances in lieu of Stationery—					
To the Admiral Superintendent - - - - -	£. 40				
" Master Attendant - - - - -	12				
" Master Shipwright - - - - -	20				
" Chief Engineer and Inspector of Machinery - - - - -	15				
" Storekeeper - - - - -	25				
" Accountant - - - - -	20				
" Cashier - - - - -	15				
" Chemist - - - - -	2				
		149	- -	149	- -
Postage, Travelling Charges on the Public Service, Advertisements, Chapel Allowances, and other small Expenses - - - - -		850	- -	850	- -
D.—CONTINGENCIES, DOCKYARDS AT HOME - - - - -	£.	1,119	- -	1,119	- -
TOTAL SALARIED ESTABLISHMENT - - - - -	£.	35,648	- -	35,726	- -
W A G E S:					
DOCKYARD:					
For the Wages of Shipwrights, other Artificers and Labourers, viz. :—					
		Number of Men.			
		1868/69.	1867/68.		
On the Establishment - - - - -	2,014	2,087	} 133,781 - -	139,510 - -	
Hired Labourers, 1st Class (entitled to Pensions) - - - - -	61	88			
For the Wages of Hired Artificers and Labourers - - - - -	2,075 566	2,175 1,927	21,696 - -	93,083 - -	
STEAM FACTORY:					
For the Wages of Artificers and Labourers employed in the Steam Factory - - - - -	820	941	54,781 - -	62,781 - -	
TOTAL Established and Hired - - - - -	3,461	5,043	210,258 - -	295,374 - -	
For the Wages of Persons employed for Yard Service Afloat, in Steam Tugs, Hoys, &c. - - - - -			3,266 - -	3,947 - -	
For the Hire of Teams - - - - -			2,067 - -	2,067 - -	
For Wages of the Metropolitan Police Force employed in the Dockyard, and Gun Boat Slips, Haslar, under 23 & 24 Vict. c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses at 3 s. per man per week, and for General Superintendence at 3 s. 4 d. per man per month):—					
1 Superintendent - - - - -	£. 262				
6 Inspectors - - - - -	823				
17 Serjeants - - - - -	1,376				
106 Constables - - - - -	7,265				
			9,726 - -	9,540 - -	
130					
TOTAL WAGES - - - - -	£.	225,317	- -	310,928	- -
TOTAL PORTSMOUTH DOCKYARD - - - - -	£.	260,965	- -	346,654	- -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
DEVONPORT.		£. s. d.	£. s. d.
Admiral Superintendent:			
Sea Pay and Allowances as a Rear Admiral, viz:			
Sea Pay at 3 l. a day	£. 1,095 - -		
Table Money at 1 l. 10 s. a day	547 10 -		
Allowance in lieu of provisions at 1 s. 6 d. a day	27 10 -		
Allowance for fuel and lights at 1 l. per month	13 - -		
		1,683 - -	1,683 - -
Flag Lieutenant to Admiral Superintendent:			
Sea Pay at 10 s. a day	£. 182 10 -		
Allowance in lieu of provisions, &c., at 2 s. a day	36 10 -		
		219 - -	219 - -
Retinue of Admiral Superintendent:			
Coxswain and Four Domestics	£. 159 13 9		
Allowance in lieu of provisions to ditto—five at 1 s. 6 d. a day each	137 6 3		
		297 - -	297 - -
Master Attendant		600 - -	600 - -
Assistant to ditto		500 - -	500 - -
Ditto for Service at Keyham		500 - -	500 - -
Harbour Master of Plymouth Sound and adjacent anchorage		500 - -	500 - -
Master Sailmaker		200 - -	200 - -
Master Rigger		220 - -	220 - -
Ditto (acting) for Service at Keyham (allowance to Boatswain of Her Majesty's Ship "Indus," in addition to his full Pay)		18 - -	18 - -
Master Ropemaker		250 - -	250 - -
Foreman of Ropemakers		200 - -	200 - -
Foreman of Line Spinners		160 - -	160 - -
Two Layers in the Rope Yard at 100 l. each		200 - -	200 - -
Master Shipwright		650 - -	650 - -
Two Assistants to ditto at 400 l. each		800 - -	800 - -
Timber Inspector		400 - -	400 - -
Boatswain		220 - -	220 - -
Ditto for Service at Keyham		220 - -	220 - -
Allowance to two Boatswains of Her Majesty's Ship "Indus," in addition to their full Pay, for assisting the Boatswains of Devonport and Keyham Yards in the superintendence of Labourers, at 1 s. a day each		36 - -	36 - -
Master Smith		250 - -	250 - -
Seven Foremen of the Yard, at 250 l. each		1,750 - -	1,750 - -
Gratuity to one of the above		50 - -	50 - -
Foreman of the Yard (to superintend the Joiners)		180 - -	180 - -
Foreman of Caulkers		180 - -	180 - -
Converter of Timber		150 - -	150 - -
Two Foremen of Smiths		275 - -	275 - -
Nineteen Inspectors		2,525 - -	2,525 - -
Carried forward		13,233 - -	13,233 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME—continued.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.												
DEVONPORT—continued.		£. s. d.	£. s. d.												
Brought forward - - -		13,233 - -	13,233 - -												
Chief Engineer and Inspector of Machinery - - -	- - -	650 - -	650 - -												
Assistant to ditto - - -	- - -	500 - -	500 - -												
Assistant Inspector of Steam Machinery - - -	- - -	250 - -	250 - -												
Foreman of the Factory, from 185 l. to 225 l. per annum - - -	- - -	225 - -	225 - -												
Engineer and Millwright - - -	- - -	200 - -	200 - -												
Foreman of the Boilermakers (increase of salary of 20 l., not to be continued to his successor) - - -	- - -	200 - -	200 - -												
Storekeeper - - -	- - -	600 - -	600 - -												
Two Foremen of Storehouses, at 120 l. each - - -	- - -	240 - -	240 - -												
Cashier - - -	- - -	500 - -	500 - -												
Superintending Civil Engineer - - -	- - -	500 - -	500 - -												
Allowance to ditto for extra special Duties - - -	- - -	50 - -	50 - -												
Clerk of Works, from 190 l. to 300 l. per annum - - -	- - -	300 - -	300 - -												
Clerk and Accountant, from 90 l. to 300 l. per annum - - -	- - -	300 - -	300 - -												
Clerk and Draughtsman, from 90 l. to 300 l. per annum (Keyham) - - -	- - -	150 - -	370 - -												
Two Foremen of Works, from 120 l. to 180 l. per annum (one for Devonport and one for Keyham) - - -	- - -	360 - -	360 - -												
Staff Surgeon - - -	- - -	529 - -	500 - -												
Assistant Surgeon - - -	- - -	228 - -	300 - -												
Allowances to ditto, for Servants, Fuel and Lights - - -	- - -	92 - -	- - -												
Assistant Surgeon, for service at Keyham - - -	- - -	300 - -	300 - -												
Chaplain * - - -	- - -	350 - -	350 - -												
Head Master of the Dockyard School, for the Instruction of Apprentices in the Yard, from 200 l. to 250 l. per annum - - -	- - -	250 - -	250 - -												
Gratuity to ditto, for the Instruction of Naval Engineers - - -	- - -	50 - -	50 - -												
Assistant to ditto, from 100 l. to 140 l. per annum - - -	£. 140	- - -	- - -												
Addition to ditto, to make up his previous Salary, &c. at Malta - - -	10	- - -	- - -												
		150 - -	140 - -												
Allowance to ditto, for attending to the Instruction of Engineer Students - - -	- - -	30 - -	30 - -												
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service; viz.:															
<table><tr><th colspan="2">NUMBER.</th></tr><tr><th>1868/69.</th><th>1867/68.</th></tr><tr><td>3</td><td>3</td></tr><tr><td>23</td><td>23</td></tr><tr><td>26</td><td>26</td></tr><tr><td>Salaries - £.</td><td>5,684 5,574</td></tr></table>		NUMBER.		1868/69.	1867/68.	3	3	23	23	26	26	Salaries - £.	5,684 5,574		
NUMBER.															
1868/69.	1867/68.														
3	3														
23	23														
26	26														
Salaries - £.	5,684 5,574														
Senior Clerks - - -	from 315 l. to 450 l. per annum - - -	1,219 - -	1,189 - -												
Clerks - - -	from 90 l. to 300 l. per annum - - -	4,465 - -	4,385 - -												
Salaries - £.															
		150 - -	140 - -												
		30 - -	30 - -												
Temporary Employment of Clerks and Writers - - -		1,705 - -	1,567 - -												
Additional Day's Pay to - ditto - for Leap Year - - -		- - -	8 - -												
(TOTAL Salaries, exclusive of Accountant's Department, £. 27,626.)															
Carried forward - - - £.		27,626 - -	27,547 - -												

* In addition to Half-pay.

* In addition to Half-pay.

Carried forward - - - £.

0.7.

F 3

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
DEVONPORT— <i>continued.</i>				£. s. d.	£. s. d.
Brought forward - - -				27,626 - -	27,547 - -
ACCOUNTANT'S DEPARTMENT.					
Accountant - - - - -				600 - -	600 - -
Inspector of Stores - - - - -				350 - -	350 - -
Clerks on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:					
	NUMBER.				
	1868/69.	1867/68.			
Senior Clerk - -	1	1	from 315 l. to 450 l. per annum - -	444 - -	429 - -
Clerks - - -	9	8	from 90 l. to 300 l. ditto - -	1,745 - -	1,552 - -
	10	9			
Salaries - £.	2,189	1,981			
Temporary Employment of Clerks and Writers - - - - -				1,057 - -	1,338 - -
(Total Salaries of the Accountant's Department, £. 4,196.)					
A.—SALARIES and ALLOWANCES, DOCKYARDS AT HOME - - - - £.				31,822 - -	31,816 - -
Allowances for House Rent—					
To the Chaplain (not to be continued to successor) - - -			£. 70 - -		
„ Superintending Civil Engineer - - - - -			75 - -		
„ Clerk of Works - - - - -			50 - -		
„ Master Ropemaker - - - - -			35 - -		
„ Boatswain (Keyham) - - - - -			40 - -		
				270 - -	270 - -
Rent of Ballast Pond - - - - -				15 - -	15 - -
Rent of Premises under St. George's Hall, Stonehouse, for the detention of disorderly Seamen - - - - -				30 - -	30 - -
Rent of Water for Dockyard, Marine Barracks, and Naval Hospital, £. 575 - -					
Ditto - - additional Supply - - - - -			150 - -		
Ditto - - for Steam Factory at Keyham - - - - -			400 - -		
Ditto - - for Port Admiral's House - - - - -			10 - -		
				1,135 - -	1,135 - -
Rates and Taxes - - - - -				490 - -	490 - -
B.—RENTS, RATES, TAXES, and WATER, DOCKYARDS AT HOME - - - £.				1,940 - -	1,940 - -
C.—Lighting the Yard, Steam Factory at Keyham, &c., with Gas - - - -				1,830 - -	1,960 - -
Carried forward - - - £.				35,592 - -	35,716 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

DOCKYARDS AT HOME—continued.

DEVONPORT—continued.

Brought forward - - -

		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
Brought forward - - -		35,592 - -	35,716 - -
Allowance to Roman Catholic Priest - - - - -		120 - -	120 - -
Allowances in lieu of Stationery—			
To the Admiral Superintendent - - - - -	£.40		
" Master Attendant - - - - -	16		
" Master Shipwright - - - - -	20		
" Chief Engineer - - - - -	15		
" Storekeeper - - - - -	25		
" Accountant - - - - -	20		
" Cashier - - - - -	15		
" Harbour Master - - - - -	8		
		154 - -	154 - -
Postage, Travelling Charges on the Public Service, Advertisements, Chapel Allowances, and other small Expenses - - - - -		900 - -	900 - -
D.—CONTINGENCIES, DOCKYARDS AT HOME - - - - -	£.	1,174 - -	1,174 - -
TOTAL SALARIED ESTABLISHMENT - - - - -	£.	36,766 - -	36,890 - -

WAGES:

DOCKYARD:

For the Wages of Shipwrights, and other Artificers and Labourers; viz.:—

	Number of Men.			
	1868/69.	1867/68.		
On the Establishment - - - - -	1,852	1,918	129,796 - -	133,476 - -
Hired Labourers, 1st Class (entitled to Pension) - - - - -	201	213		
	2,053	2,131		
For the Wages of Hired Artificers and Labourers - - - - -	193	443	6,457 - -	17,874 - -
STEAM FACTORY, KEYHAM.				
For the Wages of Artificers and Labourers employed in the Steam Factory - - - - -	792	878	46,414 - -	51,414 - -
TOTAL Established and Hired - - - - -	3,038	3,452	182,667 - -	202,764 - -
For the Wages of persons employed for Yard Service Afloat, in Steam Tugs, Hoys, &c. - - - - -			4,819 - -	5,709 - -
For the Hire of Teams - - - - -			2,038 - -	2,038 - -
For Wages of the Metropolitan Police Force employed in the Dockyard and Keyham Factory, under 23 and 24 Vict., c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses at 3 s. per man per week, and for General Superintendence, at 3 s. 4 d. per man per month), viz.:				
1 Superintendent - - - - -	£.262	- -		
6 Inspectors - - - - -	823	- -		
15 Serjeants - - - - -	1,214	- -		
90 Constables - - - - -	6,169	- -		
			8,468 - -	8,260 - -
112				
TOTAL WAGES - - - - -	£.		197,992 - -	218,771 - -
TOTAL DEVONPORT DOCKYARD - - - - -	£.		234,758 - -	255,661 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS AT HOME— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PEMBROKE:		£. s. d.	£. s. d.
Captain Superintendent:			
Sea Pay and Allowances as Captain of the First Class, viz.:			
Sea Pay, at 1 l. 12 s. 11 d. a day - - - - -	£. 600 14 7		
Command Money - - - - -	91 5 -		
Allowance in lieu of Provisions, at 1 s. 6 d. a day - - -	27 7 6		
Ditto - for Fuel and Lights, at 1 l. a month - - -	13 - -		
Civil Allowance - - - - -	267 12 11	1,000 - -	1,000 - -
Retinue of Captain Superintendent:			
Coxswain and three Domestics - - - - -	126 4 7		
Allowance in lieu of Provisions to ditto, 4 at 1 s. 6 d. a day each - - - - -	109 15 5	236 - -	236 - -
Master of Her Majesty's Ship "Saturn," doing duty as Queen's Harbour Master and Master Attendant (in addition to Full Pay) - - - - -		50 - -	50 - -
Master Shipwright - - - - -		650 - -	650 - -
Timber Inspector and Inspector of Stores - - - - -		350 - -	350 - -
Boatswain - - - - -		220 - -	220 - -
Master Smith - - - - -		250 - -	250 - -
Three Foremen of the Yard - - - {Senior, at £. 300 Two at £. 250 each - 500}		800 - -	800 - -
Gratuity to one of the above - - - - -		50 - -	- - -
Converter of Timber - - - - -		150 - -	150 - -
Foreman of Smiths - - - - -		125 - -	125 - -
Eight Inspectors - - - - - {One at £. 170 Three at 150 Four at 125}		1,120 - -	1,270 - -
Foreman of Millwrights (increase of Salary of 50 l., not to be continued to his suc- cessor) - - - - -		200 - -	200 - -
Storekeeper and Cashier - - - - -		600 - -	600 - -
Assistant Civil Engineer, from 315 l. to 500 l. per annum - - - - -		500 - -	500 - -
Clerk and Draughtsman, from 90 l. to 300 l. per annum - - - - -		290 - -	280 - -
Staff Surgeon - - - - -		530 - -	450 - -
Allowance to ditto, for Servants, Fuel, and Lights - - - - -		53 - -	- - -
Chaplain* - - - - -		400 - -	400 - -
Schoolmaster, for the Instruction of Apprentices in the Yard, from 150 l. to 200 l. per annum - - - - -		163 - -	153 - -
Ditto, allowance in consideration of teaching the Engineers of the Coast Guard Ships - - - - -		25 - -	25 - -
Carried forward - - - £.		7,762 - -	7,709 - -

* In addition to Half-pay

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*DOCKYARDS AT HOME—*continued.*PEMBROKE—*continued.*

Brought forward - - -

Clerks on the Establishment, at Salaries varying according to Rank and Length of Service; viz.:

NUMBER.		
1868/69.	1867/68.	
Senior Clerks -	2	2
Clerks - - -	7	6
	9	8
Salaries - £.	2,237	2,049

from 315 l. to 450 l. per annum -
from 90 l. to 300 l. - ditto -

REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
£. s. d.	£. s. d.
7,762 - -	7,709 - -
790 - -	760 - -
1,447 - -	1,289 - -
258 - -	396 - -
- - -	2 - -
450 - -	450 - -
461 - -	441 - -
294 - -	285 - -
11,462 - -	11,332 - -
175 - -	150 - -
100 - -	95 - -
275 - -	245 - -
700 - -	750 - -
90 - -	90 - -
300 - -	300 - -
390 - -	390 - -
12,827 - -	12,717 - -

Temporary Employment of Writers - - - - -

Additional Day's Pay to - ditto for Leap Year - - - - -

(TOTAL Salaries, exclusive of Accountant's Department, 10,257 l.)

Accountant - - - - -

Clerks on the Establishment, at Salaries varying according to Rank and Length of Service; viz.:

NUMBER.		
1868/69.	1867/68.	
Clerks - - -	3	3
Salaries - £.	461	441

from 90 l. to 300 l. per annum - -

Temporary Employment of Clerks and Writers - - - - -

(TOTAL Salaries of Accountant's Department, 1,205 l.)

A.—SALARIES and ALLOWANCES, DOCKYARDS AT HOME - - - - £.

Allowances for House Rent:

To the Accountant - - - - -	£. 50
To the Clerk acting as Secretary to the Superintendent - - - -	50
To the Assistant Civil Engineer - - - - -	75

175 - - 150 - -

Rates and Taxes - - - - -

100 - - 95 - -

B.—RENTS, RATES, TAXES, and WATER, DOCKYARDS AT HOME - - £.

275 - - 245 - -

C.—Lighting the Yard with Gas - - - - -

700 - - 750 - -

Allowances in lieu of Stationery:

To the Captain Superintendent - - - - -	£. 25
„ Master Shipwright - - - - -	20
„ Storekeeper and Cashier - - - - -	25
„ Timber Inspector and Inspector of Stores - - - - -	5
„ Accountant - - - - -	15

90 - - 90 - -

Postage, Travelling Charges on the Public Service, Advertisements, Chapel Allowances, and other small Expenses - - - - -

300 - - 300 - -

D.—CONTINGENCIES, DOCKYARDS AT HOME - - - - £.

390 - - 390 - -

TOTAL SALARIED ESTABLISHMENT - - - £.

12,827 - - 12,717 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD.

GIBRALTAR:

Naval Officer in charge of Establishments, &c.:

Sea Pay and Allowances as a Captain of the 1st Class, viz.:

Sea Pay, at 1 l. 12 s. 11 d. a day	-	-	-	-	-	£. 600	14	7
Command Money	-	-	-	-	-	91	5	-
Allowance in lieu of Provisions, at 1 s. 6 d. a day	-	-	-	-	-	27	7	6
Ditto - for Fuel and Lights, at 1 s. 9 d. a day	-	-	-	-	-	31	18	9
Civil Allowance	-	-	-	-	-	108	-	5

Allowance to - - ditto - - to provide Wages for two

Servants - - - - - 73 - -

Allowance in lieu of Provisions for two Servants - - - 53 13 9

Allowance to an Engineer, Royal Navy, in addition to full Pay - - - - -

Clerk of Works, from 250 l. to 350 l. per annum - - - - -

Two Clerks, from 90 l. to 300 l. per annum - - - - -

Temporary Employment of Writers - - - - -

N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - £.

O.—Rates and Taxes - - - - -

P.—Lighting the Yard with Gas - - - - -

Allowance in lieu of Stationery - - - - -

Postage and other small Expenses - - - - -

Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - £.

TOTAL SALARIED ESTABLISHMENT - - - £.

WAGES:

For the Wages of Shipwrights, other Artificers and Labourers, viz.:

	NUMBERS.			
	1868/69.	1867/68.		
On the Establishment - - - - -	3	3	148	139
Hired Artificers and Labourers - - - - -	4	(as required)	306	260
Hired Artificers and Labourers in Factory - - - - -	6	-	440	-
TOTAL Established and Hired - - - - -	13	3	894	399

Wages of Persons employed for Yard Service Afloat - - - 1,500 - - 1,500 - -

Wages of Police Force employed in the Yard - - - 282 - - 282 - -

TOTAL WAGES - - - £. 2,676 - - 2,181 - -

TOTAL GIBRALTAR NAVAL YARD - - - £. 5,015 - - 4,495 - -

MALTA:

SALARIED ESTABLISHMENT:

Admiral Superintendent:

Sea Pay and Allowances as a Rear Admiral:

Sea Pay, at 3 l. a day - - - - - £. 1,095 - -

Table Money, at 2 l. a day - - - - - 730 - -

Allowance in lieu of Provisions, at 1 s. 6 d. a day - - - 27 7 6

Allowance for Fuel and Lights, at 1 l. a month - - - 13 - -

Civil Allowance - - - - - 64 12 6

Flag Lieutenant to Admiral Superintendent:

Sea Pay, at 10 s. a day - - - - - £. 182 10 -

Allowance in lieu of Provisions, at 2 s. a day - - - 36 10 -

Carried forward - - - £. 2,149 - - 2,149 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD— <i>continued.</i>			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
MALTA— <i>continued.</i>			£. s. d.	£. s. d.
Salaried Establishment— <i>continued.</i>				
Brought forward - - -			2,149 - -	2,149 - -
Retinue of Admiral Superintendent:				
Coxswain and five Domestics - - - - -	£. 188	11 8		
Allowance in lieu of Provisions to ditto - six at 1 s. 6 d. a day each - - - - -	164	8 4	353 - -	353 - -
Master Attendant and Queen's Harbour Master - - - - -			500 - -	500 - -
Master Shipwright - - - - -			550 - -	550 - -
Boatswain (increase of 20 l. not to be continued to successor) - - - - -			250 - -	230 - -
Foreman of Shipwrights (increase of Salary not to be continued to his successor) - - - - -			200 - -	200 - -
Foreman of Smiths - - - - -			160 - -	160 - -
Engineer in charge of the Machinery of both the Naval and Victualling Yards - - - - -			550 - -	550 - -
Foreman of Engineer Smiths - - - - -			160 - -	160 - -
Foreman of Fitters - - - - -			180 - -	180 - -
Naval Storekeeper and Accountant - - - - -			600 - -	600 - -
Clerk of Works, from 250 l. to 350 l. per annum - - - - -			340 - -	330 - -
Clerk and Accountant, from 150 l. to 300 l. per annum - - - - -			250 - -	240 - -
Foreman of Works, from 200 l. to 250 l. per annum - - - - -			228 - -	218 - -
Chaplain (for additional Salary of 50 l. a year. See Naval Prison, Malta, page 113) - - - - -			300 - -	300 - -
Inspector of Police - - - - -			160 - -	160 - -
Schoolmaster of the Dockyard Schools, from 120 l. to 150 l. per annum - - - - -			120 - -	143 - -
Assistant to - ditto - - - - -			50 - -	50 - -
Clerks - { Two Senior, from 315 l. to 450 l. per annum - - - - -	£. 824	- - -	1,882 - -	1,697 - -
{ Six, from 90 l. to 300 l. per annum - - - - -	1,058	- - -		
Temporary employment of Writers - - - - -			733 - -	805 - -
Additional Day's Pay to - ditto for Leap Year - - - - -			- - -	2 - -
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - - -	£.		9,715 - -	9,577 - -
Rent of House for the Commander-in-Chief - - - - -			125 - -	125 - -
Rent of Stable for - - - ditto - - - - -			15 - -	15 - -
Rent of two tenements under the House of the Commander in Chief - - - - -			3 - -	3 - -
Allowances for House-rent:				
To the Superintendent's Secretary (borne in Her Majesty's ship "Hibernia") - - - - -			£. 50 - -	
„ Surgeon - ditto - - - - -			50 - -	
„ Clerk of Works - - - - -			40 - -	
„ Clerk and Accountant (Works) - - - - -			40 - -	
„ Foreman of Works - - - - -			35 - -	
„ Inspector of Police - - - - -			30 - -	
„ Schoolmaster - - - - -			30 - -	
„ established { Two at 40 l. a year each } - - - - -			200 - -	
Clerks { Four at 30 l. „ } - - - - -				
To a Writer (late temporary Clerk) - - - - -			30 - -	
O.—RENTS, RATES, TAXES, and WATER, NAVAL YARDS ABROAD - - - - -	£.		648 - -	648 - -
P.—Lighting the Dockyard with Gas - - - - -			300 - -	300 - -
Allowances in lieu of Stationery:				
To the Admiral Superintendent - - - - -			£. 40 - -	
„ Master Attendant - - - - -			3 - -	
„ Master Shipwright - - - - -			4 10 - -	
„ Engineer - - - - -			4 10 - -	
„ Naval Storekeeper and Accountant - - - - -			12 - -	
„ Surgeon (borne in Her Majesty's ship "Hibernia") - - - - -			2 2 - -	
Postage, Printing, Advertisements, Chapel Allowances, and other small Expenses - - - - -			121 18 -	121 18 -
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - -	£.		188 - -	188 - -
TOTAL SALARIED ESTABLISHMENT (Carried forward) - - - - -			10,851 - -	10,713 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

DOCKYARDS ABROAD—continued.				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
MALTA—continued.				£. s. d.	£. s. d.
Brought forward - - - £.				10,851 - -	10,713 - -
WAGES.					
DOCKYARD:					
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:					
	Number of Men.				
	1868/69.	1867/68.			
On the Establishment - - - - -	55	55		3,352 - -	3,277 - -
Hired Artificers and Labourers - - - - -	153	151		5,834 - -	5,786 - -
Labour for coaling Vessels - - - - -	-	-		800 - -	800 - -
STEAM FACTORY:					
For the Wages of Artificers and Labourers employed in the Steam Factory - - - - -	{ 84 and 8 permanent }	{ 84 and 8 permanent }		5,426 - -	5,504 - -
TOTAL Established and Hired - - - - -	300	298		15,412 - -	15,367 - -
For the Wages of persons employed for Yard Service afloat in Steam Tugs, Hoys, &c.				659 - -	659 - -
For the Wages of the Police Force employed in the Dockyard - - - - -				2,939 - -	2,936 - -
TOTAL WAGES - - - - - £.				19,010 - -	18,962 - -
TOTAL MALTA NAVAL YARD - - - - - £.				29,861 - -	29,675 - -
HALIFAX:					
SALARIED ESTABLISHMENT:					
Naval and Victualling Storekeeper and Accountant - - - - -				500 - -	500 - -
Three Clerks, from 90 l. to 300 l. per annum - - - - -				552 - -	505 - -
Allowance to - ditto - to meet increased cost of living - - - - -				150 - -	150 - -
Temporary Employment of Writers - - - - -				91 - -	86 - -
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - - - £.				1,293 - -	1,241 - -
Rates and Taxes - - - - -				19 - -	19 - -
Supply of Water by Contract - - - - -				120 - -	120 - -
O.—RENTS, RATES, TAXES, and WATER, NAVAL YARDS ABROAD - - - - - £.				139 - -	139 - -
P.—Lighting the Yard with Gas - - - - -				50 - -	70 - -
Allowance to Roman Catholic Priest - - - - -				20 - -	20 - -
Allowance in lieu of Stationery, to the Naval and Victualling Storekeeper and Accountant - - - - -				12 - -	12 - -
Postage, Travelling Charges on the Public Service, Advertisements, and other small Expenses - - - - -				79 - -	79 - -
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - - £.				111 - -	111 - -
TOTAL SALARIED ESTABLISHMENT - - - - - £.				1,593 - -	1,561 - -
WAGES:					
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:					
	Number of Men.				
	1868/69.	1867/68.			
On the Establishment - - - - -	55	37		1,920 - -	2,423 - -
Hired Artificers and Labourers - - - - -	11	-		537 - -	-
TOTAL Established and Hired - - - - -	36	37			
TOTAL WAGES - - - - - £.				2,457 - -	2,423 - -
TOTAL HALIFAX NAVAL YARD - - - - - £.				4,050 - -	3,984 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD— <i>continued.</i>			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
BERMUDA.			£. s. d.	£. s. d.
SALARIED ESTABLISHMENT:				
Naval Officer in charge of Establishments, &c.:				
Sea Pay and Allowances as Captain of the First Class:				
Sea Pay, at 1 l. 12 s. 11 d. a day	- - - - -	£. 600 14 7		
Command Money	- - - - -	136 17 6		
Allowance in lieu of Provisions, at 1 s. 6 d. a day	- - - - -	27 7 6		
Ditto - for Fuel and Lights, at 1 s. 9 d. a day	- - - - -	31 18 9		
Civil Allowance	- - - - -	62 1 8	859 - -	859 - -
Retinue of Naval Officer in Charge:				
Coxswain and three Domestics	- - - - -	£. 126 - -		
Allowance in lieu of Provisions to ditto; four, at 1 s. 6 d. a day each	- - - - -	109 - -	235 - -	235 - -
Naval and Victualling Storekeeper and Accountant	- - - - -		600 - -	600 - -
Leading Man of Storehouses	- - - - -		120 - -	120 - -
Clerk of the Works, from 250 l. to 350 l. per annum	- - - - -		250 - -	254 - -
Clerk and Draughtsman, from 90 l. to 300 l. per annum	- - - - -		110 - -	90 - -
Chaplain *	- - - - -		400 - -	400 - -
Allowance to a Naval Schoolmaster of Her Majesty's Ship "Terror," for service in the Dockyard, in addition to his Full Pay			36 - -	36 - -
Schoolmistress of the Female School			16 - -	16 - -
Clerks { One Senior, from 315 l. to 450 l. per annum - - - - - £. 345 - - } { Three, from 90 l. to 300 l. per annum - - - - - 459 - - }			804 - -	752 - -
Allowance to the Clerks and the Clerk and Draughtsman, to meet the increased cost of living			250 - -	250 - -
Temporary employment of Writers			331 - -	331 - -
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - - - £.			4,011 - -	3,943 - -
O—Rents, Taxes &c. - - - - -			10 - -	10 - -
Allowance to Roman Catholic Priest - - - - -			20 - -	20 - -
Allowances in lieu of Stationery:				
To the Naval Officer in charge	- - - - -	£. 15 - -	30 - -	30 - -
„ Naval and Victualling Storekeeper and Accountant	- - - - -	15 - -		
Postage, Advertisements, Printing, Chapel Allowances, and other small Expenses -			56 - -	56 - -
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - - £.			106 - -	106 - -
TOTAL SALARIED ESTABLISHMENT - - - - - £.			4,127 - -	4,059 - -
WAGES:				
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:				
			Number of Men.	
			1868/69.	1867/68.
On the Establishment	- - - - -	46	47	3,665 - -
Hired Artificers and Labourers	- - - - -	100	101	4,695 - -
STEAM FACTORY:				
For the Wages of Artificers and Labourers employed in the Steam Factory	- - - - -	9	9	1,388 - -
TOTAL Established and Hired - - - - -			155	157
			9,748 - -	10,559 - -
For the Wages of Persons employed for Yard Service afloat in Steam Tugs, Hoys, &c. - - - - -			1,962 - -	1,974 - -
TOTAL WAGES - - - - - £.			11,710 - -	12,533 - -
TOTAL BERMUDA NAVAL YARD - - - - - £.			15,837 - -	16,592 - -

* In addition to Half-pay.

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD— <i>continued.</i>				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
ANTIGUA:				£. s. d.	£. s. d.
SALARIED ESTABLISHMENT:					
N.—Clerk in charge - - - - -				350 - -	350 - -
Q.—Purchase of Stationery, Travelling Charges, and other small Contingencies -				36 - -	36 - -
TOTAL SALARIED ESTABLISHMENT - - - £.				386 - -	386 - -
WAGES:					
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:					
				Number of Men.	
				1868/69.	1867/68.
On the Establishment - - - - -				8	7
Hired Artificers and Labourers - - - - -				5	5
TOTAL WAGES - - -				13	12
TOTAL ANTIGUA NAVAL YARD - - - £.				966 - -	966 - -
JAMAICA:					
SALARIED ESTABLISHMENT:					
Clerk in charge - - - - -				500 - -	500 - -
One Clerk, from 90 l. to 300 l. per annum - - - - -				118 - -	248 - -
Temporary employment of Writers - - - - -				305 - -	218 - -
Allowance to ditto to meet increased cost of living - - - - -				150 - -	150 - -
Store Porter - - - - -				120 - -	120 - -
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - £.				1,193 - -	1,236 - -
Allowance for House Rent to a Clerk - - - - -				- - -	30 - -
Ditto - ditto - Writers (late Temporary Clerks) - - - - -				91 - -	91 - -
O.—RENTS, RATES, TAXES, and WATER, NAVAL YARDS ABROAD - - - £.				91 - -	121 - -
Allowance to Roman Catholic Priest - - - - -				20 - -	20 - -
Allowance in lieu of Stationery to Clerk in charge - - - - -				15 - -	15 - -
Travelling Charges, Advertisements, and other small Expenses - - - - -				40 - -	40 - -
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - - £.				75 - -	75 - -
TOTAL SALARIED ESTABLISHMENT - - - £.				1,359 - -	1,432 - -
WAGES:					
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:					
				Number of Men.	
				1868/69.	1867/68.
On the Establishment - - - - -				28	28
Hired Artificers and Labourers - - - - -				46	46
TOTAL WAGES - - -				74	74
TOTAL JAMAICA NAVAL YARD - - - £.				6,538 - -	6,588 - -
ASCENSION:					
Salaried Establishment - - - - -				{ (Provided for under Vote No. 7, Victualling Yards, &c.)	
WAGES:					
For the Wages of Artificers, viz.:					
				Number of Men.	
				1868/69.	1867/68.
Hired Artificers - - - - -				6	6
TOTAL ASCENSION NAVAL YARD - - - £.				861 - -	861 - -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
SIERRA LEONE:		£. s. d.	£. s. d.
SALARIED ESTABLISHMENT:			
Allowance of 100 <i>l.</i> per annum to the Assistant Commissary General, for superintending the receipt and issue of Provisions and Stores - - - - -		{ (Provided for under Vote No. 7, Victualling Yards, &c.)	
WAGES:			
For the Wages of Shipwrights, other Artificers, and Labourers - - - - -		60 - -	60 - -
TOTAL for SIERRA LEONE NAVAL YARD - - - £.		60 - -	60 - -
CAPE OF GOOD HOPE:			
SALARIED ESTABLISHMENT:			
Naval Officer in charge of Establishments:			
Sea Pay and Allowances as Captain of the 1st Class, viz.:			
Sea Pay, at 1 <i>l.</i> 12 <i>s.</i> 11 <i>d.</i> a day - - - - - £. 600 14 7			
Command Money - - - - - 136 17 6			
Allowance in lieu of Provisions, at 1 <i>s.</i> 6 <i>d.</i> a day - 27 7 6			
Ditto - for Fuel and Lights, at 2 <i>s.</i> 3 <i>d.</i> a day - 41 1 3			
Civil Allowance - - - - - 61 19 2		* 868 - -	* 868 - -
Retinue of Naval Officer in charge of Establishments:			
Three domestics - - - - - £. 86 13 9			
Allowance in lieu of Provisions to ditto, Three at 1 <i>s.</i> 6 <i>d.</i> a day each - - - - - 82 6 3		169 - -	169 - -
Additional Master of Flag Ship for service in the Naval Yard (Allowance in addition to his Full Pay) - - - - -		91 - -	91 - -
Allowance to Chaplain (in addition to Full Pay) - - - - -		100 - -	100 - -
Allowance to Chief Engineer (- ditto -) - - - - -		73 - -	73 - -
Clerks - {	One Senior, from 315 <i>l.</i> to 450 <i>l.</i> per annum - - - £. 450 - -		
	One, from 90 <i>l.</i> to 300 <i>l.</i> per annum - - - 140 - -	590 - -	567 - -
Allowance to ditto, to meet increased cost of living - - - - -		100 - -	100 - -
Store Porter - - - - -		120 - -	120 - -
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - £.		2,111 - -	2,088 - -
O.—Allowance to Store Porter for House Rent - - - - -		30 - -	- -
Carried forward - - - £.		2,141 - -	2,088 - -

* *Note.*—In addition to the foregoing, the Superintendent is paid the following sums, as Commodore of the 2d Class, for his Naval Duties:

Allowance, at 10 <i>s.</i> a day - - - - -	£. 182 10 -
Table Money at 20 <i>s.</i> a day - - - - -	365 - -
	£. 547 10 -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

DOCKYARDS ABROAD—continued.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.													
CAPE OF GOOD HOPE—continued.																
Salaried Establishment—continued.		£. s. d.	£. s. d.													
Brought forward - - -		2,141 - -	2,088 - -													
Allowance to Roman Catholic Priest - - - - -		20 - -	20 - -													
Allowances in lieu of Stationery—																
To the Naval Officer in charge - - - - - £. 18 - -																
,, Master borne in Flag Ship for Service in the Yard - 5 10 -																
,, Chief Engineer - - - - - 4 10 -																
		28 - -	28 - -													
Postage, Travelling Charges, Advertisements, and other small Expenses - -		150 - -	130 - -													
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - - £.		198 - -	178 - -													
TOTAL SALARIED ESTABLISHMENT - - - £.		2,339 - -	2,266 - -													
WAGES:																
For the Wages of Shipwrights, other Artificers and Labourers, viz. :																
	<table><tr><th colspan="2">Number of Men.</th></tr><tr><th>1868/69.</th><th>1867/68.</th></tr><tr><td>On the Establishment - - - - -</td><td>6</td><td>6</td></tr><tr><td>Hired Artificers and Labourers - - - - -</td><td>26</td><td>26</td></tr><tr><td>TOTAL WAGES - - -</td><td>32</td><td>32</td></tr></table>	Number of Men.		1868/69.	1867/68.	On the Establishment - - - - -	6	6	Hired Artificers and Labourers - - - - -	26	26	TOTAL WAGES - - -	32	32		
Number of Men.																
1868/69.	1867/68.															
On the Establishment - - - - -	6	6														
Hired Artificers and Labourers - - - - -	26	26														
TOTAL WAGES - - -	32	32														
		614 - -	605 - -													
		1,768 - -	1,825 - -													
		2,382 - -	2,430 - -													
TOTAL CAPE OF GOOD HOPE, NAVAL YARD - - - £.		4,721 - -	4,696 - -													
TRINCOMALEE:																
SALARIED ESTABLISHMENT:																
Naval and Victualling Storekeeper and Accountant - - - - -		600 - -	569 - -													
Two Clerks, from 90 l. to 300 l. per annum - - - - -		322 - -	335 - -													
Allowance to ditto, to meet increased cost of living - - - - -		100 - -	100 - -													
Temporary Employment of Writers - - - - -		63 - -	63 - -													
Allowance to a Carpenter of Her Majesty's Ship "Octavia" for performing the duties of Foreman of Shipwrights (in addition to his Sea Pay and Allowances) - - - - -		80 - -	- -													
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - £		1,165 - -	1,067 - -													
O.—Allowances for House Rent—																
To additional Surgeon of Her Majesty's Ship "Octavia" £. 30 - -		95 - -	70 - -													
To Carpenter of ditto - - - - - 25 - -																
To a Clerk - - - - - 40 - -																
Allowance to Roman Catholic Priest - - - - -		10 - -	10 - -													
Allowance in lieu of Stationery to the Naval and Victualling Storekeeper and Ac- countant - - - - -		30 - -	30 - -													
Carried forward - - - £.		40 - -	40 - -													

Vote 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
TRINCOMALEE— <i>continued.</i>			
Salaried Establishment— <i>continued.</i>		£. s. d.	£. s. d.
Allowance for a Horse:	Brought forward - - -	40 - -	40 - -
To the Naval and Victualling Storekeeper and Accountant - £.42 11 -		85 2 -	85 2 -
„ Additional Surgeon of Her Majesty's Ship "Octavia" 42 11 -		9 18 -	9 18 -
Postage and other small Expenses - - - - -			
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - - £.		135 - -	135 - -
TOTAL SALARIED ESTABLISHMENT - - - - - £.		1,395 - -	1,272 - -
WAGES:			
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:			
	Number of Men.		
	1868/69.	1867/68.	
On the Establishment - - - - -	26	26	497 - -
Hired Artificers and Labourers - - - - -	16	16	196 - -
TOTAL WAGES - - - - -	42	42	693 - -
TOTAL TRINCOMALEE NAVAL YARD - - - - - £.		2,088 - -	1,965 - -
SINGAPORE:			
N.—Allowance to the Senior Commissariat Officer for taking charge of the Naval Coal Dépôt and Stores - - - - -		100 - -	- -
HONG KONG:			
SALARIED ESTABLISHMENT:			
Naval Officer in charge of Establishments, &c.:			
Sea Pay and Allowances as a Captain of the 1st Class, viz.:			
Sea Pay, at 1 <i>l.</i> 12 <i>s.</i> 11 <i>d.</i> a day - - - - -	£.600 14 7		
Command Money - - - - -	136 17 6		
Allowance in lieu of Fuel and Lights, at 2 <i>s.</i> 3 <i>d.</i> a day - - - - -	41 1 3		
Civil Allowance - - - - -	62 6 8	* 841 - -	841 - -
Retinue of Naval Officer in charge of Establishments:			
Coxswain and three Domestics - - - - -	£.126 10 -		
Allowance in lieu of Provisions to ditto, four at 1 <i>s.</i> 6 <i>d.</i> a day each - - - - -	109 10 -	236 - -	236 - -
Master Attendant - - - - -			500 - -
Master of Her Majesty's Ship "Princess Charlotte," Dépôt and Receiving Ship, for charge of Naval Stores, and for acting as Harbour Master (Allowance in addition to Sea Pay) - - - - -		100 - -	100 - -
Assistant Surgeon of Her Majesty's Ship "Rodney," for additional duties in attending the dockyard men and their families (Allowance in addition to Sea Pay) - - - - -		46 - -	- -
Naval and Victualling Storekeeper - - - - -		700 - -	700 - -
Accountant - - - - -		700 - -	700 - -
Clerks {Two Senior, from 315 <i>l.</i> to 450 <i>l.</i> per annum - - - - -	£.780 - -		
{Three from 90 <i>l.</i> to 300 <i>l.</i> per annum - - - - -	389 - -	1,169 - -	1,118 - -
Allowance to ditto to meet increased Cost of living - - - - -		500 - -	500 - -
Temporary employment of Writers - - - - -		1,173 - -	700 - -
N.—SALARIES and ALLOWANCES, NAVAL YARDS ABROAD - - - - - £.		5,465 - -	5,395 - -
O.—Allowances for House-rent—			
To the Naval and Victualling Storekeeper - - - - -	£.254 - -		
„ Accountant - - - - -	200 - -		
„ Established Clerks {Two at 100 <i>l.</i> } - - - - -	440 - -	1,094 - -	1,240 - -
{Three at 80 <i>l.</i> }			
„ Inspector of Machinery afloat - - - - -	200 - -		
Carried forward - - - - - £.		6,559 - -	6,635 - -

* Note.—In addition to the foregoing, the Superintendent is paid the following sums as Commodore of the 2nd Class, for his naval duties:—

Allowance, at 10 <i>s.</i> a day - - - - -	£.182 10 -
Table money, at 20 <i>s.</i> a day - - - - -	365 - -
	547 10 -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

DOCKYARDS ABROAD—continued.		REQUIRED for the Service of the Year 1868/69.		LAST VOTE for the Financial Year 1867/68.	
HONG KONG—continued.					
Salaried Establishment—continued.					
Brought forward - - -		£.	s. d.	£.	s. d.
		6,559	- -	6,635	- -
Allowances in lieu of Stationery—					
To the Naval Officer - - - - - £. 12					
,, Naval and Victualling Storekeeper - - - - - 20					
,, Accountant - - - - - 20					
		52	- -	52	- -
Postage, Boat-hire, Advertisements, and other small Expenses - - - - -		250	- -	250	- -
Q.—CONTINGENCIES, NAVAL YARDS ABROAD - - - - - £.		302	- -	302	- -
TOTAL SALARIED ESTABLISHMENT - - - - - £.		6,861	- -	6,937	- -
WAGES:					
For the Wages of Shipwrights, other Artificers, and Labourers, viz.:					
		Number of Men.			
		1868/69.	1867/68.		
On the Establishment - - - - -		*10	*9	1,118	- -
Hired Artificers and Labourers - - - - -		137	137	4,097	- -
STEAM FACTORY:					
For the Wages of Artificers and Labourers em- } ployed in the Steam Factory - - - - - }		63	63	3,137	- -
TOTAL Established and Hired - - -		210	209	8,352	- -
* Borne on Books of "Princess Charlotte."					
For the Wages of the Police employed in the Yard - - - - -				2,667	- -
TOTAL WAGES - - - - - £.				11,019	- -
TOTAL HONG KONG NAVAL YARD - - - - - £.				17,880	- -
				17,030	- -
ESQUIMALT (VANCOUVER).					
SALARIED ESTABLISHMENT - - - - -				Provided for under Vote No. 7, Victualling Yards, &c.	
WAGES:					
For the Wages of Artificers, &c.:					
		Number of Men.			
		1868/69.	1867/68.		
On the Establishment - - - - -		1	1	240	- -
TOTAL ESQUIMALT NAVAL ESTABLISHMENT - - -				240	- -
				240	- -
TOTAL OF YARDS AT HOME AND ABROAD - - - - - £.				1,217,625	- -
Abate—				1,374,928 - -	
Labour at the several Yards at Home and Abroad in making and repairing Yard Machinery, chargeable to Vote No. 11, New Works, &c., and pro- vided for under that Vote (see page 97), viz.—					
At Home - - - - - £. 27,051 - -					
Abroad - - - - - 1,012 - -					
				28,063	- -
				28,560	- -
		£.		1,189,562	- -
Wages of Artificers and Labourers breaking up Old Ships - - - - -				15,000	- -
For Work in connection with Gunnery Fittings - - - - -				4,000	- -
Extra Pay to Artificers, &c. of the Fleet at Home - - - - -				4,000	- -
Ditto - - - ditto - - - Abroad - - - - -				9,000	- -
Survey Valuation of Stock in the several Dockyards, and for General Surveys of Stock at Devonport and Pembroke Yards - - - - -				2,000	- -
TOTAL - - - - - £.				1,223,562	- -
				1,375,368	- -

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—*continued.*

A B S T R A C T. - - - - -

YARD.	A.		B.		C.		D.		E. - - - -			
	Salaries and Allowances.		Rents, Rates, Taxes, and Water.		Lighting with Gas.		Contingencies.		WAGES. - - - -			
	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	Established.		Hired.	
AT HOME.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.
DEPTFORD - - -	9,686	9,895	365	365	450	300	269	269	33,947	33,721	3,323	14,158
WOOLWICH - - -	19,342	19,163	1,059	1,084	1,650	1,650	692	692	71,555	70,875	8,292	33,101
CHATHAM - - -	21,648	20,946	560	574	1,450	1,400	535	535	97,606	98,699	80,196	83,391
SHEERNESS - - -	17,794	17,622	635	525	700	700	657	657	70,586	70,182	3,490	8,035
PORTSMOUTH - - -	30,189	30,312	2,065	2,065	2,275	2,230	1,119	1,119	133,781	139,510	21,696	93,083
DEVONPORT - - -	31,822	31,816	1,940	1,940	1,830	1,960	1,174	1,174	129,796	133,476	6,457	17,874
PEMBROKE - - -	11,462	11,332	275	245	700	750	390	390	53,777	53,312	18,736	19,201
HAULBOWLINE - - -	-	-	-	-	-	-	-	-	-	-	670	515
									Abate—Labour at the several Yards, in Making and Repairing Yard Machinery (chargeable to Vote No. 11, New Works, &c.), and provided for under that Vote.			
TOTAL of YARDS at HOME } £.	141,943	141,086	6,899	6,798	9,055	8,990	4,836	4,836	591,048	599,775	142,860	269,358
ABROAD.	N.		O.		P.		Q.		R. - - - -			
GIERALTAR - - -	1,926	1,901	174	174	200	200	39	39	148	139	306	260
MALTA - - -	9,715	9,577	648	648	300	300	188	188	3,352	3,277	6,634	6,586
HALIFAX - - -	1,293	1,241	139	139	50	70	111	111	1,920	2,423	537	-
BERMUDA - - -	4,011	3,943	10	10	-	-	106	106	3,665	3,636	4,695	5,538
ANTIGUA - - -	350	350	-	-	-	-	36	36	476	240	104	340
JAMAICA - - -	1,193	1,236	91	121	-	-	75	75	2,518	2,518	2,661	2,638
ASCENSION - - -	-	-	-	-	-	-	-	-	-	-	861	861
SIERRA LEONE - - -	-	-	-	-	-	-	-	-	-	-	60	60
CAPE OF GOOD HOPE - -	2,111	2,088	30	-	-	-	198	178	614	605	1,768	1,825
TRINCOMALEE - - -	1,165	1,067	95	70	-	-	135	135	497	497	196	196
SINGAPORE - - -	100	-	-	-	-	-	-	-	-	-	-	-
HONG KONG - - -	5,465	5,395	1,094	1,240	-	-	302	302	1,118	899	4,097	4,017
ESQUIMAULT - - -	-	-	-	-	-	-	-	-	240	240	-	-
									Abate—Labour at the several Yards, in Making and Repairing Yard Machinery (chargeable to Vote No. 11, New Works, &c.), and provided for under that Vote.			
TOTAL of YARDS ABROAD } £.	27,329	26,798	2,281	2,402	550	570	1,190	1,170	14,548	14,474	21,919	22,321
TOTAL of YARDS at HOME and ABROAD } £.	169,272	167,884	9,180	9,200	9,605	9,560	6,026	6,006	605,596	614,249	164,779	291,679

Memo. :—

For Statement of the Number of Steam Ships Afloat and Building, and of the Number of Effective Sailing Ships - - - - -

See Appendix, No. 12, p. 162.

For Programme of Shipbuilding Works to be undertaken in Her Majesty's Dockyards during the year 1868-69 - - - - -

" No. 13, p. 163.

For Statement of the Number and Description of Workmen authorised as the Establishments at the several Dockyards at Home - - - - -

" No. 14, p. 173.

For Statement of the Distribution of hired Artificers, Labourers, &c. in the several Dockyards at Home - - - - -

" No. 15, p. 173.

For Statement of the Number and Description of Workmen estimated for in the Steam Factories at Home - - - - -

" No. 16, p. 174.

VOTE 6.—DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD—continued.

- - - - - ABSTRACT.

- - - E.				F.		G.		H.		Required for the Service of the Year 1868-69.	Last Vote for the Financial Year, 1867-68.	AT HOME. DEPTFORD. WOOLWICH. CHATHAM. SHEERNESS. PORTSMOUTH DEVONPORT. PEMBROKE. HAULBOWLINE.
- - - WAGES.				Wages, Yard Service Afloat.		Hire of Teams.		Wages, Police Force.				
Steam Factory.		TOTAL.										
1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.			
£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	
-	-	37,270	47,879	301	302	798	605	1,489	1,428	50,628	61,043	
40,530	45,030	120,377	149,006	2,142	2,748	826	826	3,502	3,394	149,590	178,563	
-	-	177,802	182,090	2,155	2,561	1,525	1,700	4,856	4,623	210,531	214,429	
31,277	36,277	105,353	114,494	2,697	3,330	955	955	3,558	2,962	132,349	141,245	
54,781	62,781	210,258	295,374	3,266	3,947	2,067	2,067	9,726	9,540	260,965	346,654	
46,414	51,414	182,667	202,764	4,819	5,709	2,038	2,038	8,468	8,260	234,758	255,661	
-	-	72,513	72,513	257	258	1,796	1,796	2,524	2,382	89,917	89,666	
-	-	670	515	-	-	-	-	-	-	670	515	
-	-	906,910	1,064,635	-	-	-	-	-	-	1,129,408	1,287,776	
-	-	27,051	27,997	-	-	-	-	-	-	27,051	27,997	
173,002	195,502	879,859	1,036,638	15,637	18,855	10,005	9,987	34,123	32,589	1,102,357	1,259,779	
{ TOTAL OF YARDS AT HOME.												
- - - R.				S.		T.		U.		ABROAD. GIBRALTAR. MALTA. HALIFAX. BERMUDA. ANTIGUA. JAMAICA. ASCENSION. SIERRA LEONE. CAPE OF GOOD HOPE. TRINCOMALEE. SINGAPORE. HONG KONG. ESQUIMAULT.		
1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.			
£.	£.	£.	£.	£.	£.	£.	£.	£.	£.			
440	-	894	399	1,500	1,500	-	-	282	282		5,015	4,495
5,426	5,504	15,412	15,367	659	659	-	-	2,939	2,936		29,861	29,675
-	-	2,457	2,423	-	-	-	-	-	-		4,050	3,984
1,388	1,385	9,748	10,559	1,962	1,974	-	-	-	-		15,837	16,592
-	-	580	580	-	-	-	-	-	-		966	966
-	-	5,179	5,156	-	-	-	-	-	-		6,538	6,588
-	-	861	861	-	-	-	-	-	-		861	861
-	-	60	60	-	-	-	-	-	-		60	60
-	-	2,382	2,430	-	-	-	-	-	-	4,721	4,696	
-	-	693	693	-	-	-	-	-	-	2,088	1,965	
-	-	-	-	-	-	-	-	-	-	100	-	
3,137	3,089	8,352	8,005	-	-	-	-	2,667	2,088	17,880	17,030	
-	-	240	240	-	-	-	-	-	-	240	240	
-	-	46,858	46,773	-	-	-	-	-	-	88,217	87,152	
-	-	1,012	563	-	-	-	-	-	-	1,012	563	
10,391	9,978	45,846	46,210	4,121	4,133	-	-	5,888	5,306	87,205	86,589	
183,393	205,480	925,705	1,082,848	19,758	22,988	10,005	9,987	40,011	37,895	1,189,562	1,346,368	
{ TOTAL OF YARDS AT HOME AND ABROAD.												
I.—Wages of Artificers and Labourers breaking up old Ships										15,000	15,000	
K.—Work in connection with Gunnery Fittings										4,000	-	
L.—Extra Pay to Artificers, &c. of the Fleet at Home										4,000	4,000	
V.— Ditto - - ditto - - - Abroad										9,000	9,000	
M.—Survey Valuation of Stock at the several Yards at Home, &c.										2,000	1,000	
TOTAL										1,223,562	1,375,368	

VOTE 7.

VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expense of the VICTUALLING YARDS and TRANSPORT ESTABLISHMENTS at HOME and ABROAD.

Eighty-seven Thousand One Hundred and Seventy-nine Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—SALARIES AND ALLOWANCES - VICTUALLING YARDS, AT HOME	19,550	19,354	196	—
B.—RENTS, RATES, TAXES AND WATER - - - DITTO - - -	1,251	1,251	—	—
C.—LIGHTING WITH GAS - - - - - DITTO - - -	725	565	160	—
D.—CONTINGENCIES - - - - - DITTO - - -	647	647	—	—
E.—WAGES TO ARTIFICERS, &c. - - - - - DITTO - - -	38,719	38,146	573	—
F.—WAGES, VICTUALLING YARD HOYS - - - DITTO - - -	5,385	5,426	-	41
G.—WAGES, POLICE FORCE - - - - - DITTO - - -	4,798	4,584	214	—
H.—SURVEY VALUATION OF STOCK IN THE VICTUALLING YARDS -	100	100	—	—
I.—SALARIES AND ALLOWANCES, - VICTUALLING YARDS ABROAD	5,373	5,164	209	—
K.—RENTS, RATES, TAXES, AND WATER - - - DITTO - - -	276	276	—	—
L.—LIGHTING WITH GAS - - - - - DITTO - - -	150	135	15	—
M.—CONTINGENCIES - - - - - DITTO - - -	270	270	—	—
N.—WAGES TO ARTIFICERS, &c. - - - - - DITTO - - -	8,180	8,705	-	525
O.—SALARIES AND ALLOWANCES - TRANSPORT ESTABLISHMENTS	867	904	-	37
P.—RENTS, RATES, TAXES, AND WATER - - - DITTO - - -	266	266	—	—
Q.—CONTINGENCIES - - - - - DITTO - - -	135	135	—	—
R.—WAGES TO ARTIFICERS - - - - - DITTO - - -	487	467	20	—
£.	87,179	86,395	1,387	603

NET INCREASE - - - £. 784.

Vote 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—continued.

III.

DETAILS of the foregoing.

VICTUALLING YARDS AT HOME.

ROYAL VICTORIA YARD, DEPTFORD:

SALARIED ESTABLISHMENT:

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
Captain Superintendent - - - - -	800 - -	800 - -
Master Attendant and Harbour Master - - - - -	600 - -	600 - -
Accountant of Dock and Victualling Yards (<i>see</i> Dock Yard, page 30.)	- - -	- - -
Storekeeper - - - - -	600 - -	600 - -
Store Receiver - - - - -	500 - -	500 - -
Staff Surgeon and Medical Storekeeper - - - - -	505 - -	450 - -
Allowance to - - - ditto - - - for Servants, Fuel, and Lights	53 - -	- - -
Chief Engineer and Inspector of Machinery - - - - -	- - -	400 - -

CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service; viz.:

NUMBER.						
	1868/69.	1867/68.				
Senior Clerks - - - - -	3	3	from £. 315 to £. 450 per annum - - -	1,302	- -	1,272 - -
Clerks - - - - -	10	10	„ 90 to 300 „ - - -	1,985	- -	1,965 - -
	13	13				
Salaries - - £.	3,287	3,237				

Temporary employment of Writers - - - - - 1,080 - - 936 - -
Additional day's pay to ditto, for Leap Year - - - - - 3 - -

Assistant to Master Attendant and Harbour Master - - - - -	190 - -	190 - -
Master Cooper - - - - -	250 - -	250 - -
Master Miller - - - - -	200 - -	200 - -
Two Foremen of Coopers - - - - -	{ One at £. 150 } { One at 130 }	280 - -
Superintendent of the Manufacture of Mustard - - - - -	150 - -	150 - -
Two Foremen of Storehouses, at 120 l. each - - - - -	240 - -	240 - -
Leading Man of Bakers - - - - -	120 - -	120 - -
Dispensary Assistant - - - - -	100 - -	100 - -

A.—SALARIES AND ALLOWANCES, VICTUALLING YARDS AT HOME - - - £. 8,955 - - 9,056 - -

Rent of Bavin Field - - - - -	46 - -	46 - -
Allowances for House Rent - - - - -	{ to the Master Cooper, £. 35 } { „ Master Miller, 35 }	70 - -
Rates and Taxes - - - - -	203 - -	203 - -
Water supplied for Victualling Yard - - - - -	250 - -	250 - -

B.—RENTS, RATES, AND WATER, VICTUALLING YARDS AT HOME - - - £. 569 - - 569 - -

C.— Making Gas at Government Works - - - - - 450 - - 300 - -

Allowances in lieu of Stationery - - - - -	85 - -	85 - -
Postage and Travelling Charges on the Public Service, and other small Expenses - - - - -	198 - -	198 - -

D.—CONTINGENCIES, VICTUALLING YARDS AT HOME - - - £. 283 - - 283 - -

TOTAL SALARIED ESTABLISHMENT - - - £. 10,257 - - 10,208 - -

VOTE 7. VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*VICTUALLING YARDS—*continued.*ROYAL CLARENCE YARD AT WEEVIL (GOSPORT)—*continued.*

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
Brought forward - - -	4,555 - -	4,511 - -
Allowance for House Rent to Clerk of Works - - -	50 - -	50 - -
Rates and Taxes - - -	66 - -	66 - -
B.—RENTS, RATES, TAXES, AND WATER VICTUALLING YARDS AT HOME - £.	116 - -	116 - -
C.—Lighting the Yard with Gas - - -	160 - -	160 - -
Allowances in lieu of Stationery - - -	27 - -	27 - -
Postage and Travelling Charges on the Public Service, Advertisements, Stamps, Pumping, Carting Rubbish, and other small Expenses - - -	119 - -	119 - -
D.—CONTINGENCIES, VICTUALLING YARDS AT HOME - - - £.	146 - -	146 - -
TOTAL SALARIED ESTABLISHMENT - - - £.	4,977 - -	4,933 - -

WAGES:

	Number of Men.			
	1868/69.	1867/68.		
For the Wages of Artificers and Labourers, &c., on the Establish- ment - - -	92	92	7,295 - -	7,003 - -
For the Wages of Victualling Yard Hoys - - -			1,490 - -	1,500 - -
For Wages of the Metropolitan Police Force employed in the Yard, under Act 23 & 24 Vict. c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses at 3 s. per Man per Week, and for General Superintendence at 3 s. 4 d. Man per Month):				
1 Inspector - - -	£. s. d.			
3 Serjeants - - -	137 - -			
16 Constables - - -	243 - -			
20	1,097 - -		1,477 - -	1,424 - -
TOTAL WAGES - - - £.			10,262 - -	9,927 - -
TOTAL ROYAL CLARENCE YARD - - - £.			15,239 - -	14,860 - -

ROYAL WILLIAM YARD, AT CREMILL (PLYMOUTH):

SALARIED ESTABLISHMENT:

Captain Superintendent - - -	800 - -	800 - -
Master Attendant - - -	500 - -	500 - -
Storekeeper and Accountant - - -	600 - -	558 - -

CLERKS on the Establishment, at Salaries varying according to Rank and Length of Service, viz.:

	NUMBER.			
	1868/69.	1867/68.		
Senior Clerks - - -	2	2	from £. 315 to £. 450 per annum - -	900 - -
Clerks - - -	2	2	„ 90 to 300 „ - - -	495 - -
	4	4		
Salaries - - - £.	1,395	1,384		
Carried forward - - - £.			3,295 - -	3,192 - -

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

VICTUALLING YARDS AT HOME— <i>continued.</i>							REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
ROYAL WILLIAM YARD AT CREMILL (PLYMOUTH)— <i>continued.</i>								
Salaried Establishment— <i>continued.</i>							£. s. d.	£. s. d.
Brought forward - - -							3,295 - -	3,192 - -
Temporary Employment of Writers - - - - -	-	-	-	-	-	-	258 - -	258 - -
Additional day's pay to ditto, for Leap Year - - -	-	-	-	-	-	-	- - -	1 - -
Labourer in charge at Brixham - - - - -	-	-	-	-	-	-	34 - -	34 - -
Leading Man of Coopers - - - - -	-	-	-	-	-	-	150 - -	150 - -
Leading Man of Millers - - - - -	-	-	-	-	-	-	120 - -	120 - -
Leading Man of Bakers - - - - -	-	-	-	-	-	-	100 - -	100 - -
Engineer - - - - -	-	-	-	-	-	-	120 - -	- - -
DIRECTOR OF WORKS DEPARTMENT:								
Clerk of Works, from 190 l. to 300 l. per annum - - - - -	-	-	-	-	-	-	300 - -	300 - -
Clerk and Accountant, from 90 l. to 300 l. per annum - - - - -	-	-	-	-	-	-	203 - -	193 - -
Foreman of Works, from 120 l. to 180 l. per annum - - - - -	-	-	-	-	-	-	180 - -	180 - -
A.—SALARIES and ALLOWANCES, VICTUALLING YARDS AT HOME - - - £.							4,760 - -	4,528 - -
Allowances for House Rent - - - - -	{ To Superintendent's Secretary, £. 50 To Clerk of Works - - - 50 }						100 - -	100 - -
Rates and Taxes - - - - -	-	-	-	-	-	-	50 - -	50 - -
Rent of Water - - - - -	-	-	-	-	-	-	260 - -	260 - -
B.—RENTS, RATES, TAXES, and WATER, VICTUALLING YARDS AT HOME - - £.							410 - -	410 - -
C.—Lighting the Yard with Gas - - - - -							110 - -	100 - -
Allowances in lieu of Stationery - - - - -	-	-	-	-	-	-	27 - -	27 - -
Postage and Travelling Charges on the Public Service, Advertisements, Stamps, and other small Expenses - - - - -	-	-	-	-	-	-	131 - -	131 - -
D.—CONTINGENCIES, VICTUALLING YARDS AT HOME - - - £.							158 - -	158 - -
TOTAL SALARIED ESTABLISHMENT - - - £.							5,438 - -	5,196 - -
WAGES:								
							Number of Men.	
							1868/69.	1867/68.
For the Wages of Artificers and Labourers on the Establishment							83	84
							6,954 - -	6,890 - -
For the Wages of Victualling Yard Hoys - - - - -							1,420 - -	1,462 - -
For Wages of the Metropolitan Police Force employed in the Yard, under Act 23 & 24 Vict. c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses at 3s. per Man per Week, and for General Superintendence at 3s. 4d. per Man per Month):								
							£. s. d.	
1 Inspector - - - - -	-	-	-	-	-	-	137 - -	- - -
3 Serjeants - - - - -	-	-	-	-	-	-	243 - -	- - -
15 Constables - - - - -	-	-	-	-	-	-	1,028 - -	- - -
19 - - - - -	-	-	-	-	-	-	1,408 - -	1,354 - -
TOTAL WAGES - - - £.							9,782 - -	9,706 - -
TOTAL ROYAL WILLIAM YARD - - - £.							15,220 - -	14,902 - -

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*VICTUALLING YARDS AT HOME—*continued.*

HAULBOWLINE VICTUALLING YARD:

SALARIED ESTABLISHMENT:

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
Naval and Victualling Storekeeper and Accountant - - - - -	500 - -	500 - -
Two Clerks, from 90 <i>l.</i> to 300 <i>l.</i> per annum - - - - -	471 - -	450 - -
Non-commissioned Officer of Marines employed as Clerk, &c., at 4 <i>s.</i> a day or 28 <i>s.</i> a week, in addition to his Pension - - - - -	73 - -	73 - -
Temporary Employment of a Writer - - - - -	86 - -	86 - -
Foreman of Coopers - - - - -	150 - -	150 - -
A.—SALARIES and ALLOWANCES, VICTUALLING YARDS AT HOME - - - £.	1,280 - -	1,259 - -
Rent of Premises at Queenstown, occupied by Port Admiral - - - £. 92	-107 - -	107 - -
Rent of Land adjoining - - - - - 10		
Rent of Water for ditto - - - - - 5		
Allowance for House Rent to the Foreman of Coopers - - - - -		
Rates and Taxes - - - - -	26 - -	26 - -
	23 - -	23 - -
B.—RENTS, RATES, TAXES, and WATER, VICTUALLING YARDS AT HOME - - £.	156 - -	156 - -
C.—Lighting the Yard with Gas - - - - -	5 - -	5 - -
Allowance to the Chaplain of Spike Island, for Professional Attendance - - - - -	20 - -	20 - -
Allowance in lieu of Stationery - - - - -	10 10 -	10 10 -
Postage and Travelling Charges on the Public Service, Stamps, Advertisements, and other small Expenses - - - - -	29 10 -	29 10 -
D.—CONTINGENCIES, VICTUALLING YARDS AT HOME - - - £.	60 - -	60 - -
TOTAL SALARIED ESTABLISHMENT - - - £.	1,501 - -	1,480 - -

WAGES:

	Number of Men.			
	1868/69.	1867-68.		
For the Wages of Artificers, Labourers, Watchmen, &c., on the Establishment - - - - -	12	13	1,310 - -	1,293 - -
For the Wages of Victualling Yard Hoys - - - - -			82 - -	83 - -
TOTAL WAGES - - - £.			1,392 - -	1,376 - -
TOTAL HAULBOWLINE VICTUALLING YARD - - - £.			2,893 - -	2,856 - -

VICTUALLING YARDS ABROAD.

GIBRALTAR:

SALARIED ESTABLISHMENT - - - - -	Number of Men.		Provided for under Vote No. 6, Dock- yards and Naval Yards at Home and Abroad.	
	1868/69.	1867-68.		
For the Wages of Artificers and Labourers:				
On the Establishment - - - - -	7	7	330 - -	330 - -
TOTAL GIBRALTAR VICTUALLING YARD - - - £.			330 - -	330 - -

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

VICTUALLING YARDS ABROAD— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
MALTA:		£. s. d.	£. s. d.
Victualling Storekeeper and Accountant	- - - - -	600 - -	600 - -
Clerks - - - {One Senior, from 315 l. to 450 l. a year - - - - - £. 450	- - - - -	706 - -	686 - -
- - - {Two, from 90 l. to 300 l. a year - - - - - 256	- - - - -	266 - -	266 - -
Temporary Employment of Writers	- - - - -	175 - -	175 - -
Master Miller and Baker	- - - - -		
I.—SALARIES AND ALLOWANCES, VICTUALLING ESTABLISHMENTS ABROAD	- £.	1,747 - -	1,727 - -
K.—Allowances for House Rent {to Established Clerks - - - - - £. 60	- - - - -	90 - -	90 - -
{to a Writer (late temporary Clerk) - - - - - 30	- - - - -		
L.—Lighting the Yard with Gas - - - - -	- - - - -	100 - -	100 - -
Allowance in lieu of Stationery to the Victualling Storekeeper and Accountant - -	- - - - -	15 10 -	15 10 -
Advertisements and other small Expenses - - - - -	- - - - -	30 10 -	30 10 -
M.—CONTINGENCIES, VICTUALLING ESTABLISHMENTS ABROAD - - - - - £.	- - - - -	46 - -	46 - -
TOTAL SALARIED ESTABLISHMENT - - - - - £.	- - - - -	1,983 - -	1,963 - -
WAGES:		Number of Men.	
For the Wages of Artificers and Labourers, viz.:		1868/69.	1867/68.
On the Establishment - - - - -	- - - - -	86	86
Hired Artificers and Labourers - - - - -	- - - - -	21	21
WAGES: TOTAL Established and Hired - - - - -	- - - - -	107	107
TOTAL MALTA VICTUALLING YARD - - - - - £.	- - - - -	4,983 - -	5,353 - -
HALIFAX:		Number of Men.	
Victualling Storekeeper and Accountant (paid as Naval Storekeeper and Accountant)		1868/69.	1867/68.
Clerk, from 90 l. to 300 l. a year - - - - -	- - - - -	162	90
Temporary employment of Writers - - - - -	- - - - -	86	86
Allowance to Clerk to meet the increased cost of living - - - - -	- - - - -	50	50
I.—SALARIES AND ALLOWANCES, VICTUALLING ESTABLISHMENTS ABROAD - £.	- - - - -	298 - -	226 - -
L.—Lighting the Yard with Gas - - - - -	- - - - -	50 - -	35 - -
Allowance in lieu of Stationery to the Victualling Storekeeper and Accountant -	- - - - -	6 - -	6 - -
Fuel, Advertisements, and other small Expenses - - - - -	- - - - -	19 - -	19 - -
M.—CONTINGENCIES, VICTUALLING ESTABLISHMENTS ABROAD - - - - - £.	- - - - -	25 - -	25 - -
TOTAL SALARIED ESTABLISHMENT - - - - - £.	- - - - -	373 - -	286 - -
WAGES:		Number of Men.	
For the Wages of Artificers and Labourers, viz.:		1868/69.	1867/68.
On the Establishment - - - - -	- - - - -	1	1
Hired Artificers and Labourers - - - - -	- - - - -	1	-
TOTAL WAGES - - - - -	- - - - -	2	1
TOTAL HALIFAX VICTUALLING YARD - - - - - £.	- - - - -	488 - -	356 - -

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*VICTUALLING YARDS ABROAD—*continued.*

BERMUDA:

SALARIED ESTABLISHMENT - - - - -

WAGES:

For the Wages of Artificers and Labourers, viz.:

On the Establishment - - - - -

TOTAL BERMUDA VICTUALLING YARD - - - £.

REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
£. s. d.	£. s. d.
Provided for under Vote No. 6, Dock- yards and Naval Yards at Home and Abroad.	

Number of Men.

1868/69. 1867/68.

14 14

950 - - 950 - -

950 - - 950 - -

JAMAICA:

Paymaster in Charge of Victualling Stores at Port Royal - - - - - 250 - - 250 - -
 Clerk, from 90 *l.* to 300 *l.* a year - - - - - 255 - - 240 - -
 Temporary Employment of Writers - - - - - 86 - - 86 - -
 Allowance to Clerk, to meet the increased cost of living - - - - - 50 - - 50 - -

250 - - 250 - -

255 - - 240 - -

86 - - 86 - -

50 - - 50 - -

I.—SALARIES AND ALLOWANCES, VICTUALLING ESTABLISHMENTS ABROAD - £.

641 - - 626 - -

K.—Allowance to Clerk, for House Rent - - - - -

40 - - 40 - -

Allowance in lieu of Stationery - - - - -

10 10 - 10 10 -

Travelling Expenses, Advertisements, and other small Expenses - - - - -

37 10 - 37 10 -

M.—CONTINGENCIES, VICTUALLING ESTABLISHMENTS ABROAD - - - - - £.

48 - - 48 - -

TOTAL SALARIED ESTABLISHMENT - - - £.

729 - - 714 - -

WAGES:

For the Wages of Artificers and Labourers, viz.:

On the Establishment - - - - -

Hired Artificers and Labourers - - - - -

TOTAL WAGES - - -

Number of Men.

1868/69. 1867/68.

7 7

373 - - 373 - -

2 2

187 - - 187 - -

9 9

560 - - 560 - -

TOTAL JAMAICA VICTUALLING YARD - - - £.

1,289 - - 1,274 - -

ASCENSION:

Allowance to the { Captain - - - - -
 Paymaster - - - - -
 Chaplain - - - - -
 Surgeon - - - - -
 Chief Engineer - - - - - } Of Her Majesty's Ship "Mæander," in
 addition to their Full Pay - - - - -

Salary of the Gardener - - - - -
Ditto - - - *ditto* - and Shepherd - - - - -
 Allowance to Mistress of the Infant School - - - - -

100 - - 100 - -

150 - - 150 - -

40 - - 40 - -

40 - - 40 - -

55 - - 55 - -

100 - - 100 - -

55 - - 55 - -

16 - - 16 - -

I.—SALARIES AND ALLOWANCES, VICTUALLING ESTABLISHMENTS ABROAD - £.

501 - - 556 - -

M.—Allowance in lieu of Stationery to the Captain (12 *l.*), Paymaster (40 *l.*), and Chapel Allowances (8 *l.*) - - - - -

60 - - 60 - -

TOTAL SALARIED ESTABLISHMENT - - - £.

561 - - 616 - -

Vote 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*VICTUALLING YARDS ABROAD—*continued.*ASCENSION—*continued.*

VICTUALLING YARDS ABROAD— <i>continued.</i>				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
				£. s. d.	£. s. d.
ASCENSION— <i>continued.</i>					
WAGES:					
For the Wages of Artificers, Labourers, &c., viz.:					
On the Establishment - - - - -					
Kroomen - - - - -					
TOTAL WAGES - - -					
TOTAL ASCENSION VICTUALLING YARD - - - £.					

Number of Men.		1868/69.	1867/68.	£. s. d.	£. s. d.
1868/69.	1867/68.				
3	3	350	—	330	—
—	—	900	—	1,100	—
3	3	1,250	—	1,430	—

SIERRA LEONE:

I.—Allowance to the Assistant Commissary General for superintending the Receipt and Issue of Provisions and Stores - - - - -				100	—	100	—
K.—Rent of Store for Clothing - - - - -				36	—	36	—
M.—Small Expenses - - - - -				6	—	6	—
TOTAL SALARIED ESTABLISHMENT - - - £.				142	—	142	—

WAGES:

For the Wages of Artificers and Labourers, viz.:					
On the Establishment - - - - -					
TOTAL WAGES - - - £.					

Number of Men.		1868/69.	1867/68.	£. s. d.	£. s. d.
1868/69.	1867/68.				
6	6	240	—	240	—
		240	—	240	—

TOTAL SIERRA LEONE VICTUALLING YARD - - - £. 382 - - 382 - -

CAPE OF GOOD HOPE:

Naval Officer in Charge (paid as Naval Officer at page 56) - - - - -				395	—	370	—
Two Clerks, from 90 <i>l.</i> to 300 <i>l.</i> a year - - - - -				100	—	100	—

I.—SALARIES AND ALLOWANCES, VICTUALLING ESTABLISHMENTS ABROAD - £. 495 - - 470 - -

K.—Allowance for House Rent to one of the Clerks - - - - - 30 - - 30 - -

M.—Travelling Expenses and Contingencies - - - - - 50 - - 50 - -

TOTAL SALARIED ESTABLISHMENT - - - £. 575 - - 550 - -

WAGES:

For the Wages of Artificers and Labourers, viz.:					
On the Establishment - - - - -					
Hired Artificers and Labourers - - - - -					
TOTAL WAGES - - -					

Number of Men.		1868/69.	1867/68.	£. s. d.	£. s. d.
1868/69.	1867/68.				
3	3	193	—	193	—
2	2	117	—	117	—
5	5	310	—	310	—

TOTAL CAPE OF GOOD HOPE VICTUALLING YARD - - - £. 885 - - 860 - -

Vote 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

VICTUALLING YARDS ABROAD— <i>continued.</i>		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
ESQUIMALT (VANCOUVER):		£. s. d.	£. s. d.
SALARIED ESTABLISHMENT:			
Paymaster in charge - - - - -		600 - -	600 - -
Clerk, from 90 <i>l.</i> to 300 <i>l.</i> per annum - - - - -		128 - -	128 - -
Allowance to Clerk, to meet increased cost of living - - - - -		175 - -	175 - -
Temporary Employment of Writers - - - - -		438 - -	305 - -
<i>Additional Day's Pay to ditto, for Leap Year</i> - - - - -		- - -	1 - -
I.—SALARIES AND ALLOWANCES, VICTUALLING ESTABLISHMENTS ABROAD - £.		1,341 - -	1,209 - -
K.—Allowance to Clerk, for House Rent - - - - -		80 - -	80 - -
Allowance in lieu of Stationery to the Paymaster in charge - - - - -		20 - -	20 - -
Postage, Travelling Charges on the Public Service, and other Expenses - - -		15 - -	15 - -
M.—CONTINGENCIES, VICTUALLING ESTABLISHMENTS ABROAD - - - £.		35 - -	35 - -
TOTAL SALARIED ESTABLISHMENT - - - £.		1,456 - -	1,324 - -
WAGES:			
For the Wages of Artificers and Labourers, viz.:			
On the Establishment - - - - -	Number of Men.		
	1868/69. 1867/68.		
	2 2	365 - -	365 - -
TOTAL WAGES - - - £.		365 - -	365 - -
TOTAL ESQUIMALT VICTUALLING YARD - - - £.		1,821 - -	1,689 - -
TOTAL OF YARDS AT HOME AND ABROAD - - -		85,324 - -	84,523 - -
Survey Valuation of Stock in the several VICTUALLING YARDS - - - - -		100 - -	100 - -
	£.	85,424 - -	84,623 - -

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—continued.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
TRANSPORT ESTABLISHMENT.		
DEPTFORD:		
SALARIED ESTABLISHMENT:		
Resident Transport Officer* - - - - -	400 - -	400 - -
Senior Clerk, from 315 l. to 450 l. per annum - - - - -	391 - -	366 - -
Temporary Employment of Writers - - - - -	86 - -	138 - -
O.—SALARIES AND ALLOWANCES, TRANSPORT ESTABLISHMENTS - - £.	867 - -	904 - -
Lodging Allowances to four Carpenters, R. N., employed upon Transport Duties, in addition to their full pay - - - - -	183 - -	183 - -
Allowance in lieu of House to Senior Clerk - - - - -	50 - -	50 - -
Rates and Taxes - - - - -	33 - -	33 - -
P.—RENT, RATES, TAXES, AND WATER, TRANSPORT ESTABLISHMENTS - £.	266 - -	266 - -
Stationery Allowance to Resident Transport Officer - - - - -	5 - -	5 - -
Travelling Charges, Postage, and other small Expenses - - - - -	130 - -	130 - -
Q.—CONTINGENCIES, TRANSPORT ESTABLISHMENTS - - - £.	135 - -	135 - -
TOTAL SALARIED ESTABLISHMENT - - - £.	1,268 - -	1,305 - -
WAGES:		
For the Wages of Labourers - - - - -	487 - -	467 - -
TOTAL DEPTFORD TRANSPORT ESTABLISHMENT - - - £.	1,755 - -	1,772 - -
TOTAL - - - £.	87,179 - -	86,395 - -

* In addition to Half-pay.

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

A B S T R A C T.

VICTUALLING YARDS.	A.		B.		C.		D.	
	SALARIES AND ALLOWANCES.		RENTS, RATES, TAXES, AND WATER.		LIGHTING WITH GAS.		CONTINGENCIES.	
	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.
AT HOME:	£.	£.	£.	£.	£.	£.	£.	£.
Royal Victoria Yard - - -	8,955	9,056	569	569	450	300	283	283
Royal Clarence Yard - - -	4,555	4,511	116	116	160	160	146	146
Royal William Yard - - -	4,760	4,528	410	410	110	100	158	158
Haulbowline - - - - -	1,280	1,259	156	156	5	5	60	60
TOTAL of YARDS AT HOME - £.	19,550	19,354	1,251	1,251	725	565	647	647
ABROAD:	L.		K.		L.		M.	
Gibraltar - - - - -	-	-	-	-	-	-	-	-
Malta - - - - -	1,747	1,727	90	90	100	100	46	46
Halifax - - - - -	298	226	-	-	50	35	25	25
Bermuda - - - - -	-	-	-	-	-	-	-	-
Jamaica - - - - -	641	626	40	40	-	-	48	48
Ascension - - - - -	501	556	-	-	-	-	60	60
Sierra Leone - - - - -	100	100	36	36	-	-	6	6
Cape of Good Hope - - -	495	470	30	30	-	-	50	50
Sydney - - - - -	100	100	-	-	-	-	-	-
Barbadoes - - - - -	100	100	-	-	-	-	-	-
Auckland - - - - -	50	50	-	-	-	-	-	-
Trincomalee - - - - -	-	-	-	-	-	-	-	-
Hong Kong - - - - -	-	-	-	-	-	-	-	-
Esquimalt - - - - -	1,341	1,209	80	80	-	-	35	35
TOTAL of YARDS ABROAD - £.	5,373	5,164	276	276	150	135	270	270
TOTAL of YARDS at HOME and ABROAD } £.	24,923	24,518	1,527	2,527	875	700	917	917

TRANSPORT ESTABLISHMENT:	O.		P.		Q.	
Deptford - - - - -	867	904	266	266	135	135 -

Mem.—Statement of the numbers and description of workmen authorised as the establishments at the several Victualling Yards at Home, *see* Appendix, No. 17, p. 174.

VOTE 7.—VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD—continued.

A B S T R A C T.

E.		F.		G.		REQUIRED	LAST VOTE
WAGES TO ARTIFICERS.		WAGES, VICTUALLING YARD HOYS.		WAGES, POLICE FORCE.		for the Service of the Year	for the Financial Year
1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.
£.	£.	£.	£.	£.	£.	£. s. d.	£. s. d.
23,160	22,960	2,393	2,381	1,913	1,806	37,723 - -	37,355 - -
7,295	7,003	1,490	1,500	1,477	1,424	15,239 - -	14,860 - -
6,954	6,890	1,420	1,462	1,408	1,354	15,220 - -	14,902 - -
1,310	1,293	82	83	-	-	2,893 - -	2,856 - -
38,719	38,146	5,385	5,426	4,798	4,584	71,075 - -	69,973 - -
N.		—		—			
330	330	-	-	-	-	330 - -	330 - -
3,000	3,390	-	-	-	-	4,983 - -	5,353 - -
115	70	-	-	-	-	488 - -	356 - -
950	950	-	-	-	-	950 - -	950 - -
560	560	-	-	-	-	1,289 - -	1,274 - -
1,250	1,430	-	-	-	-	1,811 - -	2,046 - -
240	240	-	-	-	-	382 - -	382 - -
310	310	-	-	-	-	885 - -	860 - -
-	-	-	-	-	-	100 - -	100 - -
-	-	-	-	-	-	100 - -	100 - -
-	-	-	-	-	-	50 - -	50 - -
120	120	-	-	-	-	120 - -	120 - -
940	940	-	-	-	-	940 - -	940 - -
365	365	-	-	-	-	1,821 - -	1,689 - -
8,180	8,705	-	-	-	-	14,249 - -	14,550 - -
46,899	46,851	5,385	5,426 - -	4,798	4,584 - -	85,324 - -	84,523 - -
H.—For Survey Valuation of Stock in the Victualling Yards - -						100 - -	100 - -
						£. 85,424 - -	84,623 - -
R.		—		—			
487	467	-	-	-	-	1,755 - -	1,772 - -
TOTAL - - - £.						87,179 - -	86,395 - -

Vote 8.

MEDICAL ESTABLISHMENTS AT HOME AND ABROAD.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expense
MEDICAL ESTABLISHMENTS at HOME and ABROAD.

Sixty-four Thousand Eight Hundred and Twenty-four Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—SALARIES AND ALLOWANCES, MEDICAL ESTABLISHMENTS AT HOME - -	14,940	14,371	569	—
B.—RENTS, RATES, TAXES, AND WATER - - - DITTO - - - -	847	792	55	—
C.—LIGHTING WITH GAS - - - - - DITTO - - - - -	790	790	—	—
D.—CONTINGENCIES - - - - - DITTO - - - - -	1,152	1,152	—	—
E.—WAGES, &c. - - - - - DITTO - - - - -	16,639	15,740	899	—
F.—WAGES, &c., POLICE FORCE - - - - - DITTO - - - - -	2,050	1,977	73	—
G.—SALARIES AND ALLOWANCES, MEDICAL ESTABLISHMENTS ABROAD - -	9,541	9,336	205	—
H.—RENTS, RATES, TAXES, AND WATER - - - DITTO - - - - -	40	40	—	—
I.—LIGHTING WITH GAS - - - - - DITTO - - - - -	200	100	100	—
K.—CONTINGENCIES - - - - - DITTO - - - - -	279	279	—	—
L.—WAGES, &c. - - - - - DITTO - - - - -	5,184	5,226	—	42
M.—SALARIES AND ALLOWANCES, MARINE INFIRMARIES - - - - -	6,335	6,302	33	—
N.—RENTS, RATES, TAXES, AND WATER DITTO - - - - -	446	446	—	—
O.—LIGHTING WITH GAS - - - - - DITTO - - - - -	385	380	5	—
P.—CONTINGENCIES - - - - - DITTO - - - - -	298	298	—	—
Q.—WAGES, &c. - - - - - DITTO - - - - -	4,851	4,657	194	—
R.—WAGES, &c., POLICE FORCE - - - DITTO - - - - -	847	800	47	—
TOTAL - - - - -	64,824	62,686	2,180	42

NET INCREASE - - - £. 2,138.

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

III.

DETAILS of the foregoing.

MEDICAL ESTABLISHMENTS AT HOME.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
HASLAR HOSPITAL.			
SALARIED ESTABLISHMENT:		£. s. d.	£. s. d.
Captain Superintendent (paid on the Royal Clarence Victualling Establishment) -	-	—	—
Two Lieutenants, at 200 l. each* -	-	400 - -	400 - -
Two Inspectors General of Hospitals -	-	1,825 - -	1,825 - -
Two Deputy Inspectors General of Hospitals -	-	1,314 - -	1,223 - -
Agent and Steward (Increase of Salary of £. 50 not to be continued to successor) -	-	500 - -	500 - -
Staff Surgeon and Medical Storekeeper -	-	518 - -	493 - -
Chaplain † -	-	350 - -	350 - -
Four Assistant Surgeons -	-	958 - -	903 - -
Five Clerks, from 99 l. to 300 l. per annum -	-	1,250 - -	1,226 - -
Allowances to Medical Officers for Servants, Fuel, and Lights -	-	513 - -	513 - -
Additional Day's Pay for Leap Year -	-	- - -	13 - -
A.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS AT HOME - - £.	-	7,628 - -	7,446 - -
Lodging Money to Clerks -	-	164 - -	164 - -
Toll for Bridge from Gosport to Haslar (per Act 4 Will. 4, c. 4, s. 49) -	-	62 - -	62 - -
Rates and Taxes -	-	200 - -	200 - -
B.—RENTS, RATES, TAXES, and WATER, MEDICAL ESTABLISHMENTS AT HOME, £.	-	426 - -	426 - -
C.—Lighting the Hospital with Gas -	-	400 - -	400 - -
Allowance to Roman Catholic Priest -	-	30 - -	30 - -
Scripture Reader -	-	60 - -	60 - -
Allowance to the Minister of the Church of Scotland for attending to the Spiritual Wants of the Presbyterians in the Hospital -	-	20 - -	20 - -
Allowances in lieu of Stationery -	-	33 - -	33 - -
Carting and Pumping, and Gravelling the Walks by Contract -	-	160 - -	160 - -
Funerals, and Compensation for Burial Fees -	-	150 - -	150 - -
Postage, Advertisements, Conducting Lunatics, Chapel Allowances, and other small Expenses -	-	152 - -	152 - -
D.—CONTINGENCIES, MEDICAL ESTABLISHMENTS AT HOME - - - - £.	-	605 - -	605 - -
TOTAL SALARIED ESTABLISHMENT - - - £.	-	9,059 - -	8,877 - -
WAGES:			
E.—For the Wages of Matrons, Porters, Barbers, Cooks, Labourers, Nurses on the Establishment, and for occasional Employment, and Clothing for Nurses -	-	8,859 - -	8,474 - -
F.—For Wages of the Metropolitan Police Force employed in the Hospital, under Act 23 & 24 Vict. c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses, at 3 s. per man per week, and for General Superintendence, at 3 s. 4 d. per man per month), viz:—	-		
1 Inspector -	-	£. s. d.	
3 Serjeants -	-	137 - -	
11 Constables -	-	243 - -	
	-	754 - -	
15	-		
	-	1,134 - -	1,086 - -
TOTAL Wages - - - £.	-	9,993 - -	9,560 - -
TOTAL HASLAR HOSPITAL - - - £.	-	19,052 - -	18,437 - -

* In addition to Half-pay.

† In addition to part of Half-pay.

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PLYMOUTH HOSPITAL:		
SALARIED ESTABLISHMENT:		
	£. s. d.	£. s. d.
Captain Superintendent (paid on the Royal William Victualling Establishment) -	—	—
Two Lieutenants, at 200 l. each* - - - - -	400 - -	400 - -
Inspector General of Hospitals - - - - -	913 - -	913 - -
Deputy Inspector General of Hospitals - - - - -	599 - -	584 - -
Agent and Steward† - - - - -	400 - -	400 - -
Staff Surgeon and Medical Storekeeper - - - - -	493 - -	493 - -
Chaplain† - - - - -	350 - -	350 - -
Three Assistant Surgeons - - - - -	684 - -	657 - -
Three Clerks, from 90 l. to 300 l. per annum - - - - -	740 - -	560 - -
Temporary employment of Clerks - - - - -	15 - -	15 - -
Allowances to Medical Officers for Servants, Fuel, and Lights - - - - -	322 - -	322 - -
<i>Additional Day's Pay for Leap Year</i> - - - - -	- - -	7 - -
A.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS AT HOME - £.	4,916 - -	4,701 - -
House Allowance to Clerk to Superintendent - - - - -	50 - -	50 - -
Rates and Taxes - - - - -	187 - -	187 - -
B.—RENT, RATES, TAXES, and WATER, MEDICAL ESTABLISHMENTS AT HOME, £.	237 - -	237 - -
C.—Lighting the Hospital with Gas - - - - -	240 - -	240 - -
Allowance to Roman Catholic Priest - - - - -	30 - -	30 - -
Allowances in lieu of Stationery - - - - -	29 - -	29 - -
Funerals, and Compensation for Burial Fees - - - - -	15 - -	15 - -
Postage, Advertisements, Conducting Lunatics, Chapel Allowances, and other small Expenses - - - - -	130 - -	130 - -
D.—CONTINGENCIES, MEDICAL ESTABLISHMENTS AT HOME - - - - - £.	204 - -	204 - -
TOTAL SALARIED ESTABLISHMENT - - - - - £.	5,597 - -	5,382 - -
WAGES:		
E.—For the Wages of Matrons, Porters, Barbers, Cooks, Labourers, Nurses on the Establishment, and for occasional Employment, and Clothing for Nurses - -	5,207 - -	4,923 - -
F.—For Wages, of the Metropolitan Police Force employed in the Hospital, under Act 23 & 24 Vict. c. 135 (including Commutation for Clothing, Fuel, and Contingent Expenses, at 3 s. per man per week, and for General Superintendence, at 3 s. 4 d. per man per month), viz. :—		
	£. s. d.	
2 Serjeants - - - - -	162 - -	
11 Constables - - - - -	754 - -	
<u>13</u>		
	916 - -	891 - -
TOTAL Wages - - - - - £.	6,123 - -	5,814 - -
TOTAL PLYMOUTH HOSPITAL - - - - - £.	11,720 - -	11,196 - -

* In addition to Half-pay.

† In addition to part of Half-pay.

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

										REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
HAULBOWLINE HOSPITAL:											
SALARIED ESTABLISHMENT:										£. s. d.	£. s. d.
Staff Surgeon	-	-	-	-	-	-	-	-	-	493	493
Assistant Surgeon	-	-	-	-	-	-	-	-	-	228	228
Allowances to Medical Officers for Servants, Fuel, and Lights	-	-	-	-	-	-	-	-	-	92	92
Additional Day's Pay for Leap Year	-	-	-	-	-	-	-	-	-	-	2
A.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS AT HOME - £.										813	815
Allowance to a Roman Catholic Priest for services to Patients in the Hospital, and for performance of Religious Duties to Officers, Seamen, and Marines of H.M. ships										30	30
Postage, Advertisements, Travelling Charges, and other small Expenses										26	26
D.—CONTINGENCIES, MEDICAL ESTABLISHMENTS AT HOME - £.										56	56
TOTAL SALARIED ESTABLISHMENT - - - £.										869	871
WAGES:											
E.—For the Wages of Matrons, Porters, Barbers, Cooks, Labourers, Nurses on the Establishment, and for occasional Employment, and Clothing for Nurses -										739	713
TOTAL HAULBOWLINE HOSPITAL - - - £.										1,608	1,584
YARMOUTH HOSPITAL:											
(Lunatic Asylum.)											
SALARIED ESTABLISHMENT:											
Deputy Inspector General of Hospitals	-	-	-	-	-	-	-	-	-	584	584
Assisting Surgeon	-	-	-	-	-	-	-	-	-	439	402
Agent and Steward	-	-	-	-	-	-	-	-	-	300	300
Clerk from 90 <i>l.</i> to 300 <i>l.</i> per annum	-	-	-	-	-	-	-	-	-	140	-
Allowances to Medical Officers for Servants, Fuel, and Lights	-	-	-	-	-	-	-	-	-	120	120
Additional Day's Pay for Leap Year	-	-	-	-	-	-	-	-	-	-	3
A.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS AT HOME - £.										1,583	1,409
Lodging Money to Clerk										55	-
Ground Rent of Hospital										15	15
Rent of Cemetery										10	10
Rates and Taxes										4	4
Water supplied for the Hospital										100	100
B.—RENTS, RATES, TAXES, and WATER, MEDICAL ESTABLISHMENTS AT HOME, £.										184	129
C.—Lighting the Hospital with Gas - - - - -										150	150
Allowance to Vicar of North Yarmouth, for Spiritual Attendance upon the Inmates of the Asylum										100	100
Allowance to a Roman Catholic Priest, for Attendance upon the Inmates of the Asylum										15	15
Funerals, and Compensation for Burial Fees										82	82
Conducting Lunatics, Postage, Advertisements, Articles of Amusement for Lunatics, regulating Clock, and other small Expenses										90	90
D.—CONTINGENCIES, MEDICAL ESTABLISHMENTS AT HOME - £.										287	287
TOTAL SALARIED ESTABLISHMENT - - - - - £.										2,204	1,975
WAGES:											
E.—For the Wages of Matrons, Porters, Barbers, Cooks, Labourers, Nurses on the Establishment, and for occasional Employment, and Clothing for Nurses - -										1,834	1,630
TOTAL YARMOUTH HOSPITAL - - - - - £.										4,038	3,605

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

MEDICAL ESTABLISHMENTS ABROAD:

MALTA:

SALARIED ESTABLISHMENT:

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
Deputy Inspector General of Hospitals - - - - -	584 - -	584 - -
Surgeon and Medical Storekeeper - - - - -	493 - -	493 - -
Assistant Surgeon - - - - -	228 - -	273 - -
Clerk, from 90 <i>l.</i> to 300 <i>l.</i> per annum - - - - -	285 - -	270 - -
Temporary employment of a Writer - - - - -	78 - -	78 - -
Allowances to Medical Officers for Provisions, Servants, Fuel, and Lights - -	332 - -	332 - -
<i>Additional Day's Pay for Leap Year</i> - - - - -	- - -	4 - -

G.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS ABROAD - £. 2,000 - - 2,034 - -

I.—Lighting the Hospital with Gas - - - - - 200 - - 100 - -

Allowances in lieu of Stationery:

	£. s. d.	
To the Deputy Inspector General of Hospitals - - - - -	5 5 -	7 7 -
„ Surgeon and Medical Storekeeper - - - - -	2 2 -	
Postage, Boat Hire, Funerals, and other small Expenses - - - - -	60 13 -	60 13 -

K.—CONTINGENCIES, MEDICAL ESTABLISHMENTS ABROAD - £. 68 - - 68 - -

TOTAL SALARIED ESTABLISHMENT - - - £. 2,268 - - 2,202 - -

WAGES:

L.—For the Wages of Labourers, Nurses, &c. - - - - - £. 1,576 - - 1,655 - -

TOTAL MALTA MEDICAL ESTABLISHMENT - - - £. 3,844 - - 3,857 - -

BERMUDA:

SALARIED ESTABLISHMENT:

Deputy Inspector General of Hospitals - - - - -	639 - -	602 - -
Two Assistant Surgeons - - - - -	456 - -	387 - -
Clerk, from 90 <i>l.</i> to 300 <i>l.</i> per annum - - - - -	300 - -	300 - -
Allowances to ditto, to meet increased cost of living - - - - -	50 - -	50 - -
Allowances to Medical Officers for Provisions, Servants, Fuel, and Lights - -	328 - -	328 - -
<i>Additional Day's Pay for Leap Year</i> - - - - -	- - -	3 - -

G.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS ABROAD - £. 1,773 - - 1,670 - -

Allowances in lieu of Stationery:

	£. s. d.	
To the Deputy Inspector General of Hospitals - - - - -	5 5 -	7 7 -
„ Assistant Surgeons, at 1 <i>l.</i> 1 <i>s.</i> each - - - - -	2 2 -	
Travelling Charges, Funerals, and other small Expenses - - - - -	6 13 -	6 13 -

K.—CONTINGENCIES, MEDICAL ESTABLISHMENTS ABROAD - £. 14 - - 14 - -

TOTAL SALARIED ESTABLISHMENT - - - £. 1,787 - - 1,684 - -

WAGES:

L.—For the Wages of Labourers, Nurses, &c. - - - - - 965 - - 965 - -

TOTAL BERMUDA MEDICAL ESTABLISHMENT - - - £. 2,752 - - 2,649 - -

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

JAMAICA:							REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
SALARIED ESTABLISHMENT:							£. s. d.	£. s. d.
Deputy Inspector General of Hospitals	-	-	-	-	-	-	637	584
Surgeon and Medical Storekeeper	-	-	-	-	-	-	365	402
Two Assistant Surgeons	-	-	-	-	-	-	456	456
Clerk, from 90 l. to 300 l. per annum	-	-	-	-	-	-	114	104
Allowance to ditto, to meet increased cost of living	-	-	-	-	-	-	50	50
Allowances to Medical Officers for Provisions, Servants, Fuel, and Lights	-	-	-	-	-	-	440	440
<i>Additional Day's Pay for Leap Year</i>	-	-	-	-	-	-	-	4
G.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS ABROAD	-	-	-	-	-	£.	2,062	2,040
Allowances in lieu of Stationery:						£. s. d.		
To the Deputy Inspector General of Hospitals	-	-	-	-	-	5 5 -	7 7 -	7 7 -
" Surgeon and Medical Storekeeper	-	-	-	-	-	2 2 -	-	-
Travelling Charges, Boat Hire, Advertisements, Funerals, and other small Expenses	-	-	-	-	-	-	20 13 -	20 13 -
K.—CONTINGENCIES, MEDICAL ESTABLISHMENTS ABROAD	-	-	-	-	-	£.	28	28
TOTAL SALARIED ESTABLISHMENT	-	-	-	-	-	£.	2,090	2,068
WAGES:								
L.—For the Wages of Labourers, Nurses, &c.	-	-	-	-	-	-	840	840
TOTAL JAMAICA MEDICAL ESTABLISHMENT	-	-	-	-	-	£.	2,930	2,908
ASCENSION:								
SALARIED ESTABLISHMENT	-	-	-	-	-	-	{ Provided for under Vote No. 7, Victualling Yards, &c.	
WAGES:								
L.—For the Wages of Labourers, Nurses, &c.	-	-	-	-	-	-	402	402
TOTAL ASCENSION MEDICAL ESTABLISHMENT	-	-	-	-	-	£.	402	402
CAPE OF GOOD HOPE:								
SALARIED ESTABLISHMENT:								
Staff Surgeon and Medical Storekeeper	-	-	-	-	-	-	493	493
Clerk, from 90 l. to 300 l. per annum	-	-	-	-	-	-	300	300
Allowance to ditto, to meet increased cost of living	-	-	-	-	-	-	50	50
Temporary employment of Clerks	-	-	-	-	-	-	15	15
Allowance to Medical Officer for Provisions, Servants, Fuel, and Lights	-	-	-	-	-	-	112	112
<i>Additional Day's Pay for Leap Year</i>	-	-	-	-	-	-	-	1
G.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS ABROAD	-	-	-	-	-	£.	970	971
H.—House Allowance to Clerk	-	-	-	-	-	-	40	40
Allowance in lieu of Stationery to the Staff Surgeon	-	-	-	-	-	-	6	6
Washing Hospital Linen, Funerals, and other small Expenses	-	-	-	-	-	-	58	58
K.—CONTINGENCIES, MEDICAL ESTABLISHMENTS ABROAD	-	-	-	-	-	£.	64	64
TOTAL SALARIED ESTABLISHMENT	-	-	-	-	-	£.	1,074	1,075
WAGES:								
L.—For the Wages of Labourers, Nurses, &c.	-	-	-	-	-	£.	590	590
TOTAL CAPE OF GOOD HOPE MEDICAL ESTABLISHMENT	-	-	-	-	-	£.	1,664	1,665

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

HONG KONG:					REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
(“Melville” Hospital Ship.)						
SALARIED ESTABLISHMENT:					£. s. d.	£. s. d.
Deputy Inspector General of Hospitals	-	-	-	-	639	584
Surgeon	-	-	-	-	319	319
Four Assistant Surgeons	-	-	-	-	821	776
Clerk, from 90 l. to 300 l. per annum	-	-	-	-	128	108
Allowance to ditto, to meet increased cost of living	-	-	-	-	100	100
Allowance in lieu of Hospital Provisions to the Chaplain of the Ship, at 4 s. a day	-	-	-	-	73	73
Allowances to Medical Officers for Provisions, Servants, Fuel, and Lights	-	-	-	-	656	656
Additional Day's Pay for Leap Year	-	-	-	-	-	5
G.—SALARIES and ALLOWANCES, MEDICAL ESTABLISHMENTS ABROAD					2,736	2,621
Allowances in lieu of Stationery :						
To the Deputy Inspector General of Hospitals	-	-	-	5 5 -	15 7 -	15 7 -
„ Surgeon	-	-	-	2 2 -		
„ Chaplain	-	-	-	8 - -		
Funeral Expenses, Boat Hire, and other small Expenses	-	-	-	-	89 13 -	89 13 -
K.—CONTINGENCIES, MEDICAL ESTABLISHMENTS ABROAD					105	105
TOTAL SALARIED ESTABLISHMENT					2,841	2,726
WAGES:						
L.—For the Wages of Labourers, Nurses, &c.					811	774
TOTAL HONG KONG MEDICAL ESTABLISHMENT					3,652	3,500

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

MARINE INFIRMARIES.

WOOLWICH:

SALARIED ESTABLISHMENT:

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
Deputy Inspector General of Hospitals - - - - -	639 - -	639 - -
Two Assistant Surgeons - - - - -	456 - -	456 - -
Purveyor - - - - -	100 - -	100 - -
Additional Salary to the Chaplain of Woolwich Yard, for Services at the Infirmary	100 - -	100 - -
Allowances to Medical Officers, for Servants, Fuel, and Lights - - - - -	145 - -	145 - -
Additional Day's Pay for Leap Year - - - - -	- - -	3 - -

M.—SALARIES and ALLOWANCES, MARINE INFIRMARIES - - - £. 1,440 - - 1,443 - -

Lodging Money to Deputy Inspector General of Hospitals - - - - -	70 - -	70 - -
Rates and Taxes - - - - -	6 - -	6 - -
Water supplied for the Infirmary - - - - -	50 - -	50 - -

N.—RENTS, RATES, TAXES, and WATER, MARINE INFIRMARIES - - - £. 126 - - 126 - -

O.—Lighting the Infirmary with Gas - - - - - 260 - - 280 - -

P.—Shaving, keeping Linen in Repair, Washing, Funerals, and other small Expenses 51 - - 51 - -

TOTAL SALARIED ESTABLISHMENT - - - £. 1,877 - - 1,900 - -

WAGES:

Q.—For the Wages of Matrons, Nurses, and other inferior Servants, and for Clothing for Nurses - - - - - 1,899 - - 1,903 - -

R.—For Wages of the Metropolitan Police Force employed in the Infirmary, under Act 23 & 24 Vict. c. 135 (including commutation for Clothing, Fuel, and Contingent Expenses, at 3 s. per man per week, and for General Superintendence, at 3 s. 4 d. per man per month), viz.:

	£. s. d.	
1 Serjeant - - - - -	81 - -	
7 Constables - - - - -	480 - -	
8	561 - -	523 - -
TOTAL Wages - - - £.	2,460 - -	2,426 - -

TOTAL WOOLWICH MARINE INFIRMARY - - - £. 4,337 - - 4,326 - -

VOTE 8.—MEDICAL ESTABLISHMENTS AT HOME AND ABROAD—*continued.*

						REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
						£. s. d.	£. s. d.
PORTSMOUTH (MARINE ARTILLERY INFIRMARY, FORT CUMBERLAND):							
SALARIED ESTABLISHMENT:							
Staff Surgeon	-	-	-	-	-	530	530
Two Assistant Surgeons	-	-	-	-	-	502	456
Allowances to Medical Officers for Servants, Fuel, and Lights	-	-	-	-	-	131	131
<i>Additional Day's Pay for Leap Year</i>	-	-	-	-	-	-	3
M.—SALARIES and ALLOWANCES, MARINE INFIRMARIES						1,163	1,120
House Rent to Staff Surgeon						70	70
Rates and Taxes						10	10
N.—RENTS, RATES, TAXES, and WATER, MARINE INFIRMARIES						80	80
P.—Shaving, Washing, Allowance for repairing Bedding, Funerals, and other small Expenses						78	78
TOTAL SALARIED ESTABLISHMENT						1,321	1,278
Q.—WAGES:							
For the Wages of Matrons, Nurses, and other inferior Servants, and for Clothing for Nurses						271	251
TOTAL PORTSMOUTH (MARINE ARTILLERY INFIRMARY, FORT CUMBERLAND)						1,592	1,529
PLYMOUTH:							
SALARIED ESTABLISHMENT:							
Staff Surgeon	-	-	-	-	-	496	492
Two Assistant Surgeons	-	-	-	-	-	513	500
Allowances to Medical Officers for Servants, Fuel, and Lights	-	-	-	-	-	131	131
<i>Additional Day's Pay for Leap Year</i>	-	-	-	-	-	-	3
M.—SALARIES and ALLOWANCES, MARINE INFIRMARIES						1,140	1,126
Rates and Taxes						19	19
Water supplied for the Infirmary						30	30
N.—RENTS, RATES, TAXES, and WATER, MARINE INFIRMARIES						49	49
P.—Washing, Shaving, Postage, Funerals, and other small Expenses						31	31
TOTAL SALARIED ESTABLISHMENT						1,220	1,206
Q.—WAGES:							
For the Wages of Matrons, Nurses, and other inferior Servants, and for Clothing for Nurses						480	400
TOTAL PLYMOUTH MARINE INFIRMARY						1,650	1,606
DEAL:							
SALARIED ESTABLISHMENT:							
Staff Surgeon	- } Borne on the books of Her Majesty's Ship "Formidable," and paid Sea Pay under Vote No. 1.					-	-
Assistant Surgeon						-	-
Washing, Shaving, Postage, Carriage of Stores, Funerals, and other small Expenses	-	-	-	-	-	48	48
P.—CONTINGENCIES						48	48
Q.—WAGES:							
For the Wages of Matrons, Nurses, and other inferior Servants, and for Clothing for Nurses						250	230
TOTAL DEAL MARINE INFIRMARY						298	278

VOTE 8.—MEDICAL ESTABLISHMENTS

A B S T R A C T.

ESTABLISHMENT.	A.		B.		C.	
	SALARIES AND ALLOWANCES.		RENTS, RATES, TAXES, AND WATER.		LIGHTING WITH GAS.	
	1868-9.	1867-8.	1868-9.	1867-8.	1868-9.	1867-8.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
MEDICAL ESTABLISHMENTS AT HOME:						
HASLAR - - - - -	7,628 - -	7,446 - -	426 - -	426 - -	400 - -	400 - -
PLYMOUTH - - - - -	4,916 - -	4,701 - -	237 - -	237 - -	240 - -	240 - -
HAULBOWLINE - - - - -	813 - -	815 - -	- -	- -	- -	- -
YARMOUTH - - - - -	1,583 - -	1,409 - -	184 - -	129 - -	150 - -	150 - -
TOTAL MEDICAL ESTABLISH- MENTS AT HOME - - - }	£. 14,940 - -	14,371 - -	847 - -	792 - -	790 - -	790 - -
MEDICAL ESTABLISHMENTS ABROAD:						
MALTA - - - - -	2,000 - -	2,034 - -	- -	- -	200 - -	100 - -
BERMUDA - - - - -	1,773 - -	1,670 - -	- -	- -	- -	- -
JAMAICA - - - - -	2,062 - -	2,040 - -	- -	- -	- -	- -
ASCENSION - - - - -	- -	- -	- -	- -	- -	- -
CAPE OF GOOD HOPE - - - - -	970 - -	971 - -	40 - -	40 - -	- -	- -
HONG KONG - - - - -	2,736 - -	2,621 - -	- -	- -	- -	- -
TOTAL MEDICAL ESTABLISH- MENTS ABROAD - - - }	£. 9,541 - -	9,336 - -	40 - -	40 - -	200 - -	100 - -
MARINE INFIRMARIES:						
WOOLWICH - - - - -	1,440 - -	1,443 - -	126 - -	126 - -	260 - -	280 - -
CHATHAM - - - - -	1,475 - -	1,502 - -	121 - -	121 - -	125 - -	100 - -
PORTSMOUTH - - - - - (Marine Infirmary, Forton) - - - }	1,117 - -	1,111 - -	70 - -	70 - -	- -	- -
PORTSMOUTH - - - - - (Marine Artillery Infirmary, Fort Cumberland) }	1,163 - -	1,120 - -	80 - -	80 - -	- -	- -
PLYMOUTH - - - - -	1,140 - -	1,126 - -	49 - -	49 - -	- -	- -
DEAL - - - - -	- -	- -	- -	- -	- -	- -
TOTAL MARINE INFIRMARIES - - - }	£. 6,335 - -	6,302 - -	446 - -	446 - -	385 - -	380 - -
TOTAL MEDICAL ESTABLISHMENTS AT HOME AND ABROAD - - - }	£. 30,816 - -	30,009 - -	1,333 - -	1,278 - -	1,375 - -	1,270 - -

AT HOME AND ABROAD—continued.

A B S T R A C T.

D.		E.		F.			
CONTINGENCIES.		WAGES, &c., HOSPITAL ATTENDANTS.		WAGES, &c., POLICE FORCE.		REQUIRED for the Service of the Year 1868-9.	LAST VOTE for the Financial Year 1867-8.
1868-9.	1867-8.	1868-9.	1867-8.	1868-9.	1867-8.		
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
605 - -	605 - -	8,859 - -	8,474 - -	1,134 - -	1,086 - -	19,052 - -	18,437 - -
204 - -	204 - -	5,207 - -	4,923 - -	916 - -	891 - -	11,720 - -	11,196 - -
56 - -	56 - -	739 - -	713 - -	- -	- -	1,608 - -	1,584 - -
287 - -	287 - -	1,834 - -	1,630 - -	- -	- -	4,038 - -	3,605 - -
1,152 - -	1,152 - -	16,639 - -	15,740 - -	2,050 - -	1,977 - -	36,418 - -	34,822 - -

K.		L.					
68 - -	68 - -	1,576 - -	1,655 - -	- -	- -	3,844 - -	3,857 - -
14 - -	14 - -	965 - -	965 - -	- -	- -	2,752 - -	2,649 - -
28 - -	28 - -	840 - -	840 - -	- -	- -	2,930 - -	2,908 - -
- -	- -	402 - -	402 - -	- -	- -	402 - -	402 - -
64 - -	64 - -	590 - -	590 - -	- -	- -	1,664 - -	1,665 - -
105 - -	105 - -	811 - -	774 - -	- -	- -	3,652 - -	3,500 - -
279 - -	279 - -	5,184 - -	5,226 - -	- -	- -	15,244 - -	14,981 - -

P.		Q.		R.			
51 - -	51 - -	1,899 - -	1,903 - -	561 - -	523 - -	4,337 - -	4,326 - -
80 - -	80 - -	1,948 - -	1,826 - -	286 - -	277 - -	4,035 - -	3,906 - -
10 - -	10 - -	53 - -	47 - -	- -	- -	1,250 - -	1,238 - -
78 - -	78 - -	271 - -	251 - -	- -	- -	1,592 - -	1,529 - -
31 - -	31 - -	430 - -	400 - -	- -	- -	1,650 - -	1,606 - -
48 - -	48 - -	250 - -	230 - -	- -	- -	298 - -	278 - -
298 - -	298 - -	4,851 - -	4,657 - -	847 - -	800 - -	13,162 - -	12,883 - -
1,729 - -	1,729 - -	26,674 - -	25,623 - -	2,897 - -	2,777 - -	64,824 - -	62,686 - -

Vote 9.

MARINE DIVISIONS.

I. ESTIMATE of the Sum which will be required in the Year ending 31 March 1869, to defray the Expenses of MARINE DIVISIONS.

Twenty Thousand Seven Hundred and Nine Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
A.—SALARIES AND ALLOWANCES, MARINE DIVISIONS - - -	3,536 7 6	1,795 10 -	1,740 17 6	—
B.—RENTS, RATES, TAXES, AND WATER, - DITTO - - -	8,227 - -	7,292 - -	935 - -	—
C.—LIGHTING THE BARRACKS WITH GAS, DITTO - - -	3,945 - -	3,440 - -	505 - -	—
D.—CONTRIBUTIONS AND GRANTS IN AID, DITTO - - -	1,996 - -	1,916 - -	80 - -	—
E.—CONTINGENCIES, - - - - - DITTO - - -	3,004 12 6	3,004 10 -	- 2 6	—
	£. 20,709 - -	17,448 - -	3,261 - -	—
NET INCREASE - - - £. 3,261 - -				

III. DETAILS of the above.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
WOOLWICH:		
Divisional Paymaster* - - - - -	300 - -	{ Transferred from Vote No. 1.
Barrack Master, at 15 s. a day* - - - - -	273 15 -	
Two Barrack Serjeants, one at 2 s. 6 d. and one at 1 s. a day - - - - -	63 17 6	
Barrack Clerk, at 6 d. a day - - - - -	9 2 6	
Schoolmistress, for the Education of the Female Children of the Royal Marines - - - - -	36 - -	
Pupil Teacher for ditto - - - - -	18 - -	18 - -
One Day's Pay for Leap Year - - - - -	—	1 - -
A.—SALARIES and ALLOWANCES, MARINE DIVISIONS - - - £.	700 15 -	337 17 6
Allowance to the Barrack Master for House Rent, at 1 l. 1 s. a week, including commuted Allowance for Fuel and Lights - - - - -	55 - -	55 - -
Lodging Allowance to Officers and Staff Non-Commissioned Officers unprovided with Quarters - - - - -	1,221 - -	753 - -
Ground Rent of Premises in Francis-street - - - - -	5 - -	5 - -
Ground Rent of Barracks - - - - -	180 - -	180 - -
Rates and Taxes - - - - -	130 - -	120 - -
Water supplied for Barracks - - - - -	500 - -	500 - -
B.—RENTS, RATES, TAXES, and WATER, MARINE DIVISIONS - - - £.	2,091 - -	1,613 - -
C.—Lighting the Barracks with Gas - - - - -	740 - -	745 - -
Carried forward - - - £.	3,531 15 -	2,695 17 6

* In addition to Half-pay.

Vote 9.—MARINE DIVISIONS—continued.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
WOOLWICH—continued.		
Brought forward - - - £.	£. s. d. 3,531 15 -	£. s. d. 2,695 17 6
Allowance to Vicar for Accommodation of Marines at Deptford Church - - -	30 - -	30 - -
Allowance for the Accommodation of the Royal Marines in the Scotch Church - - -	70 - -	70 - -
Allowance to Roman Catholic Priest for Chapel Accommodation, &c. for the Royal Marines	100 - -	100 - -
Allowance for Accommodation of Royal Marines in the Wesleyan Chapel - - -	30 - -	30 - -
Grant in aid of the Expense of the Industrial Schools - - -	30 - -	30 - -
Contribution towards the Maintenance of a Recreation Room - - -	30 - -	30 - -
Contribution towards the Maintenance of the Military Police Force - - -	50 - -	50 - -
Allowance in aid of the Expense of the Divisional Band of Music - - -	91 - -	91 - -
D.—CONTRIBUTIONS and GRANTS IN AID, MARINE DIVISIONS - - - £.	431 - -	431 - -
E.—Washing Bedding, Compensation for Loss of Washing Sheet Money, Funerals, Carriage of Baggage, Postage and Stationery Allowance to Commandments, Adjutants, and Paymasters for Divisional Companies and their Offices, Measuring Coals, Lighting Lamps, and other small Expenses - - -	544 5 -	544 2 6
£.	4,507 - -	3,671 - -
CHATHAM :		
Divisional Paymaster* - - -	300 - -	{ Transferred from Vote No. 1. 273 15 -
Barrack Master, at 15 s. a day* - - -	273 15 -	
Allowance to ditto for charge of stores - - -	45 12 6	- - -
Barrack Serjeant, at 2 s. 6 d. a day - - -	45 12 6	45 12 6
Barrack Clerk, at 6 d. a day - - -	9 2 6	9 2 6
Schoolmistress for the Education of the Female Children of the Royal Marines	36 - -	36 - -
Assistant Schoolmistress for the Infant Schools - - -	- - -	13 - -
Schoolmistress for ditto - - -	30 - -	- - -
Monitress at School - - -	4 - -	4 - -
One Day's Pay for Leap Year - - -	- - -	1 - -
A.—SALARIES and ALLOWANCES, MARINE DIVISIONS - - - £.	744 2 6	382 10 -
Allowance to Barrack Master for House Rent, at 1 l. 1 s. a week, including commuted Allowance for Fuel and Lights - - -	55 - -	55 - -
Lodging Allowance to Officers and Staff Non-Commissioned Officers unprovided with Quarters - - -	917 - -	452 - -
Rates and Taxes - - -	76 - -	76 - -
Water for Barracks at Milton, Gravesend - - -	32 - -	32 - -
B.—RENTS, RATES, TAXES, and WATER, MARINE DIVISIONS - - - £.	1,080 - -	615 - -
C.—Lighting the Barracks with Gas - - -	880 - -	880 - -
Allowance for the Accommodation of the Royal Marines at Chatham Church - - -	60 - -	60 - -
Ditto - - - ditto - - - in Scotch Church at Rochester - - -	56 - -	56 - -
Ditto - - - ditto - - - in Wesleyan Chapel at Chatham - - -	65 - -	65 - -
Allowance to Roman Catholic Priest for performance of Religious Duties to the Royal Marines - - -	60 - -	60 - -
Grant in aid of the Expense of the Industrial Schools - - -	30 - -	30 - -
Contribution towards the Maintenance of a Recreation Room - - -	30 - -	30 - -
Ditto - - - ditto - - - Military Police Force - - -	70 - -	70 - -
Allowance in aid of the Expense of the Divisional Band of Music - - -	91 - -	91 - -
D.—CONTRIBUTIONS and GRANTS IN AID, MARINE DIVISIONS - - - £.	462 - -	462 - -
E.—Washing Bedding, Compensation for loss of Washing Sheet Money, Funerals, Carriage of Baggage, Postage and Stationery Allowance to Commandants, Adjutants, and Paymasters for Divisional Companies and their Offices, Measuring Coals, Lighting Lamps, and other small Expenses - - -	500 17 6	500 10 -
£.	3,667 - -	2,840 - -

* In addition to Half-pay.

Vote 9.—MARINE DIVISIONS—continued.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PORTSMOUTH (FORTON):		
	£. s. d.	£. s. d.
Divisional Paymaster* - - - - -	300 - -	{ Transferred from Vote No. 1.
Barrack Master, at 15 s. a day* - - - - -	273 15 -	
Barrack Serjeant, at 2 s. 6 d. a day - - - - -	45 12 6	182 10 -
Barrack Clerk, at 6 d. a day - - - - -	9 2 6	45 12 6
Schoolmistress for the Education of the Female Children of the Royal Marines - - - - -	36 - -	9 2 6
Assistant Schoolmistress for the Infant Schools - - - - -	11 - -	36 - -
Monitress at School - - - - -	4 - -	13 - -
Second Monitress at the Girls' School - - - - -	4 - -	4 - -
One Day's Pay for Leap Year - - - - -	- - -	4 - -
		1 - -
A.—SALARIES and ALLOWANCES, MARINE DIVISIONS - - - £.	683 10 -	295 5 -
Allowance to Barrack Master for House Rent, at 1 l. 1 s. a week, including commuted Allowance for Fuel and Lights - - - - -	55 - -	55 - -
Lodging Allowance to Officers and Staff Non-Commissioned Officers unprovided with Quarters - - - - -	1,280 - -	1,040 - -
Lodging Allowance to additional Chaplain of Her Majesty's Ship "Victory," for Duties to the Royal Marines - - - - -	64 - -	64 - -
Rates and Taxes - - - - -	90 - -	87 - -
B.—RENTS, RATES, TAXES, and WATER, MARINE DIVISIONS - - - £.	1,489 - -	1,246 - -
C.—Lighting the Barracks with Gas - - - - -	500 - -	480 - -
Allowance to Roman Catholic Priest for performance of Religious Duties to the Marines - - - - -	55 - -	55 - -
Allowance for the Accommodation of the Royal Marines at the Scotch Church - - - - -	18 - -	18 - -
Ditto - - - - - ditto - - - - - at the Wesleyan Chapel at Gosport - - - - -	60 - -	60 - -
Allowance to the Incumbent of St. John's, Forton, for use of his Church until a Chapel is built - - - - -	70 - -	70 - -
Grant in aid of the Expense of the Industrial Schools - - - - -	30 - -	30 - -
Contribution towards the Maintenance of a Recreation Room - - - - -	30 - -	30 - -
Allowance in aid of the Expense of the Divisional Band of Music - - - - -	91 - -	91 - -
D.—CONTRIBUTIONS and GRANTS IN AID, MARINE DIVISIONS - - - £.	354 - -	354 - -
Conveyance of Marines, per Floating Bridge, between Portsmouth and Gosport - - - - -	95 - -	95 - -
Washing Bedding, Compensation for loss of Washing Sheet Money, Funerals, Carriage of Baggage, Postage and Stationery Allowance to Commandants, Adjutants and Paymasters for Divisional Companies and their Offices, Measuring Coals, Lighting Lamps, and other small Expenses - - - - -	600 10 -	600 15 -
E.—CONTINGENCIES, MARINE DIVISIONS - - - £.	695 10 -	695 15 -
	£. 3,722 - -	3,071 - -
PORTSMOUTH:		
MARINE ARTILLERY, FORT CUMBERLAND:		
Divisional Paymaster* - - - - -	300 - -	{ Transferred from Vote No. 1.
Barrack Master, at 10 s. a day* - - - - -	182 10 -	
Barrack Serjeant, at 2 s. 6 d. a day - - - - -	45 12 6	182 10 -
Two Barrack Clerks, one at 1 s., and one at 6 d. a day - - - - -	27 7 6	45 12 6
Schoolmistress for the Education of the Female Children of the Royal Marine Artillery - - - - -	36 - -	18 5 -
Assistant Schoolmistress - - - - -	13 - -	36 - -
Assistant Schoolmistress for the Infant School - - - - -	- - -	10 - -
Schoolmistress for ditto - - - - -	30 - -	15 - -
Monitress at Girls' School - - - - -	4 - -	- - -
One Day's Pay for Leap Year - - - - -	- - -	4 - -
		1 - -
A.—SALARIES and ALLOWANCES, MARINE DIVISIONS - - - £.	638 10 -	312 7 6
Carried forward - - - £.	638 10 -	312 7 6

* In addition to Half-pay.

Vote 9.—MARINE DIVISIONS—continued.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PORTSMOUTH—continued.		
Brought forward - - - £.	£. s. d. 638 10 -	£. s. d. 312 7 6
Allowance to Barrack Master for House Rent, at 1 l. 1 s. a week, including commuted Allowance for Fuel and Lights - - -	55 - -	55 - -
Lodging Allowance to Officers and Staff Non-Commissioned Officers unprovided with Quarters - - -	765 - -	1,200 - -
Lodging Allowance to Assistant Chaplain of Her Majesty's Ship "Victory," for Duties to the Royal Marine Artillery, &c. - - -	64 - -	64 - -
Rates and Taxes - - -	320 - -	310 - -
Water supplied for Barracks - - -	500 - -	500 - -
B.—RENTS, RATES, TAXES and WATER, MARINE DIVISIONS - - - £.	1,704 - -	2,129 - -
C.—Lighting the Barracks with Gas - - -	1,000 - -	500 - -
Allowance for the Accommodation of the Royal Marine Artillery in the Wesleyan Chapel at Portsea - - -	50 - -	50 - -
Ditto - - ditto - - Scotch Church at Portsmouth - - -	25 - -	25 - -
Ditto - - ditto - - Roman Catholic Chapel at Portsea - - -	40 - -	40 - -
Grant in aid of the Expense of the Industrial Schools - - -	30 - -	30 - -
Contribution towards the Maintenance of a Recreation Room - - -	30 - -	30 - -
Allowance in aid of the Expense of the Divisional Band of Music - - -	91 - -	91 - -
D.—CONTRIBUTIONS and GRANTS IN AID, MARINE DIVISIONS - - - £.	266 - -	266 - -
Conveyance of the Royal Marine Artillery, per Floating Bridge, between Portsmouth and Gosport - - -	40 - -	40 - -
Washing Bedding, Funerals, Carriage of Baggage, Postage and Stationery Allowance to Commandants, Adjutants and Paymasters for Divisional Companies and their Offices, Measuring Coals, Lighting Lamps, and other small Expenses - - -	500 10 -	500 12 6
E.—CONTINGENCIES, MARINE DIVISIONS - - - £.	540 10 -	540 12 6
£.	4,149 - -	3,748 - -
PLYMOUTH:		
Divisional Paymaster* - - -	300 - -	{ Transferred from Vote No. 1. 273 15 - 91 5 - 9 2 6 36 - - 13 - - 1 - -
Barrack Master, at 15 s. a day* - - -	273 15 -	
Two Barrack Sergeants, at 2 s. 6 d. a day each - - -	91 5 -	
Barrack Clerk, at 6 d. a day - - -	9 2 6	
Schoolmistress, for the Education of the Female Children of the Royal Marines - - -	36 - -	
Pupil Teacher in lieu of Assistant Schoolmistress - - -	16 - -	
One Day's Pay for Leap Year - - -	- - -	1 - -
A.—SALARIES and ALLOWANCES, MARINE DIVISIONS - - - £.	726 2 6	424 2 6
Allowance to the Barrack Master for House Rent, at 1 l. 1 s. a week, including commuted Allowance for Fuel and Lights - - -	55 - -	55 - -
Lodging Allowance to Officers and Staff Non-Commissioned Officers unprovided with Quarters - - -	1,026 - -	1,100 - -
Lodging Allowance to additional Chaplain of Her Majesty's Ship "Royal Adelaide" for Duties to the Royal Marines - - -	64 - -	64 - -
Rent of a House hired for Marine Officers' Quarters - - -	- - -	55 - -
Ground Rent for the Barracks - - -	21 - -	21 - -
Rates and Taxes - - -	130 - -	115 - -
Water supplied for the Barracks - - -	41 - -	41 - -
B.—RENTS, RATES, TAXES and WATER, MARINE DIVISIONS - - - £.	1,337 - -	1,451 - -
C.—Lighting the Barracks with Gas - - -	635 - -	625 - -
Carried forward - - - £.	2,698 2 6	2,500 2 6

* In addition to Half-pay.

Vote 9.—MARINE DIVISIONS—*continued.*

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PLYMOUTH—<i>continued.</i>		
Brought forward - - - £.	£. s. d. 2,698 2 6	£. s. d. 2,500 2 6
Allowance for use of St. George's Church at Stonehouse for a Special Service to the Royal Marines - - - - -	80 - -	- - -
Allowance for the Accommodation of the Marines in the Wesleyan Chapel at Stonehouse	60 - -	60 - -
Ditto - - - - ditto - - - in the Roman Catholic Chapel at Stonehouse	44 - -	44 - -
Grant in aid of the Expense of Industrial Schools - - - - -	30 - -	30 - -
Contribution towards the Maintenance of a Recreation Room - - - - -	30 - -	30 - -
Contribution towards the Maintenance of the Military Police Force at Devonport - -	50 - -	50 - -
Allowance in aid of the Expense of the Divisional Band of Music - - - - -	91 - -	91 - -
D.—CONTRIBUTIONS and GRANTS IN AID, MARINE DIVISIONS - - - £.	385 - -	305 - -
E.—Washing Bedding, Compensation for loss of Washing Sheet Money, Funerals, Carriage of Baggage, Postage and Stationery Allowance to Commandants, Adjutants, and Paymasters for Divisional Companies and their Offices, Measuring Coals, Lighting Lamps, and other small Expenses - - - - -	550 17 6	550 17 6
£.	3,634 - -	3,356 - -
DEAL RECRUITING DEPÔT:		
(The Duties of the Barrack Master are performed by the Acting Quartermaster.)		
Allowance to a Serjeant, Royal Marines, as Acting Schoolmaster - - - - -	27 7 6	27 7 6
Acting Schoolmistress - - - - -	16 - -	16 - -
A.—SALARIES and ALLOWANCES, MARINE DIVISIONS - - - £.	43 7 6	43 7 6
Lodging Allowance to Officers and Staff Non-Commissioned Officers unprovided with Quarters - - - - -	398 - -	110 - -
Allowance to the Acting Schoolmaster in lieu of Quarters, Fuel, and Lights, at 8s. 6d. a-week	22 - -	22 - -
Rates and Taxes - - - - -	6 - -	6 - -
Water supplied for the Depôt - - - - -	100 - -	100 - -
B.—RENTS, RATES, TAXES, and WATER, MARINE DIVISIONS - - - £.	526 - -	238 - -
C.—Lighting the Depôt with Gas - - - - -	190 - -	210 - -
Allowance to a Roman Catholic Priest for performance of Religious Duties to the Marines	42 - -	42 - -
Allowance for the Accommodation of the Royal Marines in the Scotch Church - -	16 - -	16 - -
Ditto - - - - ditto - - - in the Wesleyan Chapel - - -	20 - -	20 - -
Grant in aid of the Expense of the Industrial Schools - - - - -	10 - -	10 - -
Contribution towards the Maintenance of a Recreation Room - - - - -	10 - -	10 - -
D.—CONTRIBUTIONS and GRANTS IN AID, MARINE DIVISIONS - - - £.	98 - -	98 - -
E.—Washing Bedding, Funerals, Carriage of Baggage and Stores, Postage and Stationery Allowance, Lighting Lamps, and other small Expenses - - - - -	172 12 6	172 12 6
£.	1,080 - -	762 - -

ABSTRACT.

DIVISIONS.	A.		B.		C.		D.		E.		Required for the Service of the Year 1868-69.	Last Vote for the Financial Year 1867-68
	SALARIES AND ALLOWANCES.		RENTS, RATES, TAXES, AND WATER.		LIGHTING WITH GAS.		CONTRIBUTIONS AND GRANTS IN AID.		CONTINGENCIES.			
	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.	1868-69.	1867-68.		
	£ s. d.	£ s. d.	£.	£.	£.	£.	£.	£.	£ s. d.	£ s. d.	£.	£. s. d.
WOOLWICH - - - -	700 15 -	337 17 6	2,091	1,613	740	745	431	431	544 5 -	544 2 6	4,507 - -	3,671 - -
CHATHAM - - - -	744 2 6	382 10 -	1,080	615	880	880	462	462	500 17 6	500 10 -	3,667 - -	2,840 - -
PORTSMOUTH (MARINE BARRACKS, FORTON) - - -	683 10 -	295 5 -	1,489	1,246	500	480	354	354	695 10 -	695 15 -	3,722 - -	3,071 - -
PORTSMOUTH (MARINE ARTILLERY BARRACKS, FORT CUMBERLAND) - - -	638 10 -	312 7 6	1,704	2,129	1,000	500	266	266	540 10 -	540 12 6	4,149 - -	3,748 - -
PLYMOUTH - - - -	726 2 6	424 2 6	1,337	1,451	635	625	385	303	550 17 6	550 17 6	3,634 - -	3,356 - -
DEAL (RECRUITING DEPÔT) -	43 7 6	43 7 6	526	238	190	210	98	98	172 12 6	172 12 6	1,030 - -	762 - -
TOTAL - - - £.	3,536 7 6	1,795 10 -	8,227	7,292	3,945	3,440	1,996	1,916	3,004 12 6	3,004 10 -	20,709 - -	17,448 - -

Vote 10.

NAVAL STORES FOR BUILDING AND REPAIRING THE FLEET, &c., STEAM MACHINERY, AND SHIPS BUILT BY CONTRACT.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expense of NAVAL STORES for BUILDING, REPAIRING, and OUTFITTING the FLEET and COAST GUARD, STEAM MACHINERY, and SHIPS built by CONTRACT.

Section I. Eight Hundred and Ninety-two Thousand Nine Hundred and Eight Pounds.

Section II. One Million and Ninety-two Thousand Five hundred Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868 69.	1867-68.	INCREASE.	DECREASE.
SECTION I. STOREKEEPER GENERAL OF THE NAVY.	£.	£.	£.	£.
A.—TIMBER, MASTS, DEALS, &c. - - - - -	78,731	71,625	7,106	—
B.—METALS, AND METAL ARTICLES - - - - -	166,585	178,360	-	11,775
C.—IRON ARMOUR-PLATES, IRON BEAMS, AND IRON MASTS -	103,800	132,000	-	28,200
D.—HEMP, CANVAS, &c. - - - - -	102,875	80,944	21,931	—
E.—PAINT MATERIALS, OILS, PITCH, TAR, TALLOW, AND OTHER MISCELLANEOUS ARTICLES - - - - -	184,563	187,194	-	2,631
F.—COALS AND OTHER FUEL, FOR STEAM VESSELS AND DOCKYARD PURPOSES - - - - -	225,354	207,531	17,823	—
G.—LOCAL PURCHASES OF STORES AT COAST GUARD STATIONS -	5,000	5,000	—	—
H.—FREIGHT, AND SUNDRY EXPENSES CONNECTED WITH NAVAL STORES - - - - -	20,000	20,000	—	—
I.—ESTIMATED VALUE OF ISSUES ON ACCOUNT OF OTHER DEPARTMENTS OF GOVERNMENT, &c. - - - - -	6,000	-	6,000	—
£.	892,908	882,654	52,860	42,606
<i>Abate:—Materials for making and repairing Yard Machinery chargeable to Vote No. 11, New Works, &c. and provided for under that Vote - - - - -</i>	-	27,143	-	27,143
£.	892,908	855,511	52,860	15,463
NET INCREASE - - - £. 37,397 - - -				
SECTION II. CONTROLLER OF THE NAVY.				
A.—STEAM MACHINERY FOR HER MAJESTY'S SHIPS AND VESSELS	350,500	354,779	-	4,279
B.—SHIP TO BE BUILT ON THE DESIGN OF CAPTAIN COLES -	95,000	83,350	11,650	—
C.—IRON ARMOUR-PLATED SHIPS, IRON SHIPS, AND GUNBOATS BUILDING BY CONTRACT - - - - -	435,000	351,830	83,170	—
D.—NEW IRON ARMOUR-PLATED SHIPS - - - - -	150,000	-	150,000	—
E.—EXPERIMENTAL PURPOSES, SUNDRIES, AND CONTINGENCIES	12,000	10,000	2,000	—
F.—PURCHASE OF DOCKYARD TUGS - - - - -	-	26,600	-	26,600
G.—BUILDING AND REPAIRING COAST GUARD TENDERS -	12,000	12,000	—	—
H.—REPAIRS OF SHIPS AT OTHER THAN HER MAJESTY'S DOCK-YARDS - - - - -	36,000	20,000	16,000	—
I.—SUBSISTENCE, &c., OF OFFICERS SUPERINTENDING SHIPS BUILDING BY CONTRACT - - - - -	2,000	2,000	—	—
£.	1,092,500	860,559	262,820	30,879
NET INCREASE - - - £. 231,941 - - -				

Vote 10.—NAVAL STORES FOR BUILDING AND REPAIRING THE FLEET, &c.—*continued.*

III.

DETAILS of the foregoing.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
SECTION I.—STOREKEEPER GENERAL OF THE NAVY.		
For the Purchase of Naval Stores, for the Building, Repair and Outfit of the Fleet and Coast Guard, viz.:	£. s. d.	£. s. d.
A.—Timber, Masts, Deals, &c. - - - - -	78,731 - -	71,625 - -
B.—Metals and Metal Articles (including Returns from Ships Broken up), viz.:		
Copper and Copper Articles, Iron and Iron Articles, Pig Iron, Iron Wire Rope, Anchors, Cables, Fire- hearths, Lead, &c. - - - - - £. 226,739		
Abate:		
Estimated Value of Materials returned from Ships broken up for future issue - - - - - 38,000		
Also, Materials for Making and Repairing Yard Machinery, chargeable to Vote No. 11, New Works, &c., and provided for under that Vote (see page 97) - - - - - *22,154		
	60,154	
	166,585 - -	178,360 - -
C.—Iron Armour Plates, Iron Beams, and Iron Masts - - - - -	103,800 - -	132,000 - -
D.—Hemp, Canvas, Hammocks, Seamen's Bags, Coal Sacks, Colours, Bunting, Worsted, Fearnought, and Kersey - - - - -	102,875 - -	80,944 - -
E.—Paint Materials, Oil, Pitch, Tar, Tallow, Boats, Capstans, Furniture for Ships, &c., Glass and Glaziers' Wares, Hides and Leather, Pump and Engine Gear, and various Miscellaneous Stores - - - - -	184,563 - -	187,194 - -
F.—Coals and other Fuel, viz.:		
For Steam Vessels - - - - - £. 180,354		
For Dockyard purposes - - - - - 45,000		
	225,354 -	207,531 - -
G.—For local Purchases of Stores at Coast Guard Stations - - - - -	5,000 -	5,000 - -
H.—For Freight and sundry Expenses connected with Naval Stores - -	20,000 - -	20,000 - -
	£. 886,908 - -	882,654 - -
I.—For the Estimated Value of Issues on account of other Departments of Government and Foreign Governments - - - - -	† 6,000 - -	—
	£. 892,908 - -	882,654 - -
Abate:		
Materials for Making and Repairing Yard Machinery, chargeable to Vote No. 11, New Works, &c., and provided for under that Vote (see page 97) -	* see above.	27,143 - -
TOTAL - - - £.	892,908 - -	855,511 - -

† The amount received on account of these issues has hitherto been credited to the respective Detailed Heads of the Estimate.

Vote 10.—NAVAL STORES FOR BUILDING AND REPAIRING THE FLEET, &c.—*continued.*

					REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
SECTION II.—CONTROLLER OF THE NAVY.					£. s. d.	£. s. d.
For the Purchase of Steam Machinery for Her Majesty's Ships and Vessels, and for Payments to be made for Ships and Vessels building or to be built by Contract, viz.:						
A.—STEAM MACHINERY FOR HER MAJESTY'S SHIPS AND VESSELS:						
For Engines already ordered - - - - -					311,000 - -	170,247 - -
For Engines to be ordered - - - - - £. 233,500						
Deduct: Amount to be voted in future years to complete } contracts - - - - - }					194,000	
					39,500 - -	184,532 - -
TOTAL for STEAM ENGINES - - - £.					350,500 - -	354,779 - -
SHIPS BUILDING BY CONTRACT, &c.:						
	Total Estimate.	Amount already Voted.	Amount that will probably be expended on 31 March 1868.	Amount to be Voted in future Years to complete Contracts.		
	£.	£.	£.	£.		
B.—For the Turret Ship "Cap- tain" - - - - -	275,000	93,350	180,000	- -	95,000 - -	83,350 - -
C.—For Iron Armour-plated Ships, Iron Ships, and Gun Boats -	851,300	351,830	209,000	207,300	435,000 - -	351,830 - -
D.—For new Iron Armour-plated Ships - - - - -	540,000	- -	- -	390,000	150,000 - -	—
Total - - - £.	1,666,300	445,180	389,000	597,300	680,000 - -	
E.—For Experimental Purposes - - - - -					12,000 - -	10,000 - -
F.—For the Purchase of Dockyard Tugs - - - - -					- - -	26,600 - -
G.—For Building and Repairing Coast-Guard Tenders - - - - -					12,000 - -	12,000 - -
H.—For the Repairs of Ships at other than Her Majesty's Dockyards - - -					36,000 - -	20,000 - -
I.—For the Subsistence and Travelling Expenses of Dockyard Officers and others superintending Ships building by Contract - - - - -					2,000 - -	2,000 - -
TOTAL - - - £.					1,092,500 - -	860,559 - -

Vote 11.

NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the EXPENSE of NEW WORKS, BUILDINGS, MACHINERY, and REPAIRS.

Eight Hundred and Fourteen Thousand Two Hundred and Thirty-seven Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—NEW WORKS, &c., DEPTFORD - - - - -	3,895	4,947	-	1,052
B.—DITTO - WOOLWICH - - - - -	8,982	10,740	-	1,758
C.—DITTO - CHATHAM - - - - -	229,705	188,124	41,581	—
D.—DITTO - SHEERNESS - - - - -	7,951	7,131	820	—
E.—DITTO - PORTSMOUTH - - - - -	279,858	280,495	-	637
F.—DITTO - DEVONPORT - - - - -	15,304	14,490	814	—
G.—DITTO - KEYHAM - - - - -	22,300	40,650	-	18,350
H.—DITTO - PLYMOUTH BREAKWATER - - - - -	6,000	5,170	830	—
I.—DITTO - PEMBROKE - - - - -	11,693	12,732	-	1,039
K.—DITTO - HAULBOWLINE, HOBBS POINT, &c. - - -	23,780	20,830	2,950	—
L.—DITTO - VICTUALLING ESTABLISHMENTS AT HOME	6,700	10,955	-	4,255
M.—DITTO - MEDICAL ESTABLISHMENTS AT HOME -	7,050	7,080	-	30
N.—DITTO - MARINE BARRACKS - - - - -	23,640	58,360	-	34,720
O.—DITTO - MARINE INFIRMARIES - - - - -	1,460	2,000	-	540
P.—DITTO - COAST GUARD - - - - -	20,000	30,230	-	10,230
Q.—REPAIRS AND ALTERATIONS AT THE ADMIRALTY OFFICES AT WHITEHALL AND SOMERSET HOUSE - - - - -	6,000	4,870	1,130	—
R.—NEW WORKS, &c., NAVAL ESTABLISHMENTS ABROAD - -	111,069	165,114	-	54,045
S.—DITTO - VICTUALLING ESTABLISHMENTS ABROAD -	1,760	770	990	—
T.—DITTO - MEDICAL ESTABLISHMENTS ABROAD - -	3,250	1,800	1,450	—
V.—DITTO - CONTINGENCIES (WORKS AND REPAIRS) -	10,000	10,000	—	—
W.—TEMPORARY SUPERINTENDENCE, &c., OF ENGINEERING AND ARCHITECTURAL WORKS AND REPAIRS - - - - -	13,840	12,100	1,740	—
£.	814,237	888,588	52,305	126,656

NET DECREASE - - - £. 74,351.

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—continued.

III.

DETAILS of the foregoing Charges.

DESCRIPTION OF WORKS for each Establishment.	1. TOTAL ESTIMATE for the Work.	2. AMOUNT already Voted for it.	3. GROSS SUM already Ex- pended upon it. (Posted to 31 Dec. 1867.)	4. VOTE REQUIRED for the ensuing Year 1868-69.	5. Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.
NAVAL YARDS AT HOME.					
A.—DEPTFORD:					
Foundations for Machinery - - - - -	- -	- -	- -	190	
Repairs and Maintenance of Buildings { For details, see App. p. 175. }	- -	- -	- -	2,500	
TOTAL Works and Buildings - - -	- -	- -	- -	2,690	
New Machinery - - - - -	- -	- -	- -	445	
Repairs to Plant and Machinery - - -	- -	- -	- -	760	
TOTAL Machinery - - -	- -	- -	- -	1,205	
TOTAL DEPTFORD YARD - - -	- -	- -	- -	- -	3,895
B.—WOOLWICH:					
Foundations for Machinery - - - - -	- -	- -	- -	60	
Other Works under 500 l. each - - -	- -	- -	- -	830	
Repairs and Maintenance of Buildings { For details, see App. p. 175 and 177. }	- -	- -	- -	3,800	
TOTAL Works and Buildings - - -	- -	- -	- -	4,690	
Repairs to Plant and Machinery - - -	- -	- -	- -	4,292	
TOTAL WOOLWICH YARD - - -	- -	- -	- -	- -	8,982
Carried forward - - -				£. 12,877	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—continued.

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Ex- pended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	- -	- -	- -	- -	12,877	—
NAVAL YARDS AT HOME—continued.						
C.—CHATHAM:						
Extension of the Yard - - - - -	*1,250,000	477,000	437,564	195,000†	- -	570,000
Roof over Dock No. 2, and Angle Iron Smithery -	20,000	- -	- -	5,000	- -	15,000
New Caisson for Dock No. 4 - - - - -	4,000	- -	- -	2,000	- -	- -
Foundations for Machinery - - - - -	- -	- -	- -	900	- -	- -
Other Works under 500 l. each - - -	- -	- -	- -	1,540	- -	- -
Repairs and Maintenance of Buildings - - -	- -	- -	- -	4,750	- -	- -
TOTAL Works and Buildings - - -	- -	- -	- -	209,190	- -	- -
New Machinery - - - - -	- -	- -	- -	12,062	- -	- -
Repairs to Plant and Machinery - - - - -	- -	- -	- -	8,453	- -	- -
TOTAL Machinery - - - - -	- -	- -	- -	20,515	- -	- -
TOTAL CHATHAM YARD - - - - -	- -	- -	- -	- -	229,705	—
D.—SHEERNESS:						
Foundations for Machinery - - - - -	- -	- -	- -	50	- -	- -
Other Works under 500 l. each - - -	- -	- -	- -	770	- -	- -
Repairs and Maintenance of Buildings - - -	- -	- -	- -	2,900	- -	- -
TOTAL Works and Buildings - - -	- -	- -	- -	3,120	- -	- -
New Machinery - - - - -	- -	- -	- -	199	- -	- -
Repairs to Plant and Machinery - - - - -	- -	- -	- -	4,632	- -	- -
TOTAL Machinery - - - - -	- -	- -	- -	4,831	- -	- -
TOTAL SHEERNESS YARD - - - - -	- -	- -	- -	- -	7,951	—
				Carried forward - - -	£.	250,533

* This amount is dependent upon the number of convicts available for the work, and will require to be increased, the number engaged upon the work having hitherto fallen far short of the number upon which the Estimate was based.

† Contract work, 150,000 l.; convict work, 45,000 l.

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Ex- pended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	.	£.	£.	£.
Brought forward - - -	- - -	- - -	- - -	- - -	250,533	—
NAVAL YARDS AT HOME— <i>continued.</i>						
E.—PORTSMOUTH:						
Extension of the Yard - - - - -	1,500,000*	443,800	182,720	225,000†	- - -	1,020,000
Workshops for the Repairs of Iron Ships - - -	20,000	16,000	7,470	7,000‡		
Engine and Boiler-house in connection with ditto -	- - -	- - -	- - -	3,000		
Dredging and removing Mud from Harbour - -	- - -	- - -	- - -	20,000		
Foundations for Machinery - - - - -	- - -	- - -	- - -	4,280		
Other Works under 500 £. each - - -	For details, see App. p. 175 and 177. {	- - -	- - -	300		
Repairs and Maintenance of Buildings - - -				6,850		
TOTAL Works and Buildings - - -	- - -	- - -	- - -	266,430		
New Machinery - - - - -	- - -	- - -	- - -	5,000		
Repairs to Plant and Machinery - - - - -	- - -	- - -	- - -	8,428		
TOTAL Machinery - - -	- - -	- - -	- - -	13,428		
TOTAL PORTSMOUTH YARD - - -	- - -	- - -	- - -	- - -	279,858	
F.—DEVONPORT:						
Ballast Pond near Torpoint - - - - -	- - -	- - -	- - -	700		
Foundations for Machinery - - - - -	- - -	- - -	- - -	1,400		
Other Works under 500 £. each - - -	For details, see App. p. 175 and 177. {	- - -	- - -	1,120		
Repairs and Maintenance of Buildings - - -				4,500		
TOTAL Works and Buildings - - -	- - -	- - -	- - -	7,720		
New Machinery - - - - -	- - -	- - -	- - -	4,455		
Repairs to Plant and Machinery - - - - -	- - -	- - -	- - -	3,129		
TOTAL Machinery - - -	- - -	- - -	- - -	7,584		
TOTAL DEVONPORT YARD - - -	- - -	- - -	- - -	- - -	15,304	
Carried forward - - -				£.	545,695	

* This amount is dependent upon the number of convicts available for the work, and will require to be increased, the number engaged upon the work having hitherto not exceeded one-fourth the number upon which the Estimate was based.

† Contract work, 200,000 £.; convict work, 25,000 £.

‡ 3,000 £., Re-vote.

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Ex- pended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	545,695	—
NAVAL YARDS AT HOME— <i>continued.</i>						
G.—KEYHAM:						
Turntable to Railway, East Wall, North Basin - -	-	-	-	520		
Water Pipes, &c., North End of Yard - - -	-	-	-	1,060		
Water Tank near West Wall, North Basin - - -	-	-	-	540		
Dredging in Front of Entrance to the North Basin -	-	-	-	2,600		
Foundations for Machinery - - - - -	-	-	-	1,060		
Other Works under 500 l. each - - - } For details,	-	-	-	670		
Repairs and Maintenance of Buildings } <i>see App. p. 175</i>	-	-	-	3,820		
TOTAL Works and Buildings - - - - -	-	-	-	10,270		
New Machinery - - - - -	-	-	-	7,590		
Repairs to Plant and Machinery - - - - -	-	-	-	4,440		
TOTAL Machinery - - - - -	-	-	-	12,030		
TOTAL KEYHAM YARD - - - - -	-	-	-	-	22,300	
H.—PLYMOUTH SOUND:						
Works at the Breakwater:						
Repairs and Maintenance - - - - -	-	-	-	2,500		
Repairing Damages to Masonry caused by severe } Gales in 1867 - - - - - }	20,000	2,500	-	3,500	-	14,000
TOTAL PLYMOUTH BREAKWATER - - - - -	-	-	-	-	6,000	
I.—PEMBROKE:						
Foundations for Machinery - - - - -	-	-	-	220		
Other Works under 500 l. each - - - } For details,	-	-	-	1,420		
Repairs and Maintenance of Buildings } <i>see App. p. 175</i>	-	-	-	3,740		
TOTAL Works and Buildings - - - - -	-	-	-	5,380		
New Machinery - - - - -	-	-	-	2,155		
Repairs to Plant and Machinery - - - - -	-	-	-	4,158		
TOTAL Machinery - - - - -	-	-	-	6,313		
TOTAL PEMBROKE YARD - - - - -	-	-	-	-	11,693	
Carried forward - - -	-	-	-	£.	585,688	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Ex- pended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868–69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	585,688	—
NAVAL YARDS AT HOME— <i>continued.</i>						
K.—HAULBOWLINE, HOBBS POINT, &c.						
HAULBOWLINE:						
Extension of the Yard - - - - -	150,000*	39,680	19,328	20,000	-	100,000
Improving Drainage of Yard - - - - -	-	-	-	500	-	-
Repairs and Maintenance of Build- ings - - - - - { For details, see App., p. 177. }	-	-	-	700	21,200	—
PORTLAND COALING AND WATERING DEPÔT:						
Coaling Jetties - - - - -	30,000	-	-	2,000	-	28,000
Repairs and Maintenance of Build- ings - - - - - { For details, see App., p. 177. }	-	-	-	330	2,330	—
HOBBS POINT:						
Repairs and Maintenance of Build- ings - - - - - { For details, see App., p. 177. }	-	-	-	-	50	—
LEWES NAVAL PRISON:						
Repairs and Maintenance of Build- ings - - - - - { For details, see App., p. 177. }	-	-	-	-	200	—
TOTAL of HAULBOWLINE, HOBBS POINT, }	-	-	-	-	23,780	—
L.—VICTUALLING ESTABLISHMENTS AT HOME.						
ROYAL VICTORIA YARD, AT DEPTFORD:						
Repairs and Maintenance of Build- ings - - - - - { For details, see App., p. 177. }	-	-	-	2,000	-	-
Repairs to Plant and Machinery - - - - -	-	-	-	1,200	-	-
TOTAL VICTORIA YARD - - - - -	-	-	-	-	3,200	—
ROYAL CLARENCE YARD, AT GOSPORT:						
Repairs and Maintenance of Build- ings - - - - - { For details, see App., p. 177. }	-	-	-	700	-	-
Repairs to Plant and Machinery - - - - -	-	-	-	1,250	-	-
TOTAL CLARENCE YARD - - - - -	-	-	-	-	1 950	—
Carried forward - - -				£.	609,468	—

* This sum is dependent upon the number of convicts available for the work, and will require to be increased, the number engaged upon the work having hitherto fallen far short of the number upon which the Estimate was based.

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—continued.

DESCRIPTION OF WORKS for each Establishment.	1. TOTAL ESTIMATE for the Work.	2. AMOUNT already Voted for it.	3. GROSS SUM already Ex- pended upon it. (Posted to 31 Dec. 1867.)	4. VOTE REQUIRED for the ensuing Year, 1868-69.		5. Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - - -	-	-	-	-	609,468	—
VICTUALLING ESTABLISHMENTS AT HOME— <i>contd.</i>	-	-	-	-	5,150	
ROYAL WILLIAM YARD, AT PLYMOUTH:						
Repairs and Maintenance of Build- ings - - - - - { For details, - - - - - { see App., p. 177. }	-	-	-	860		
Repairs to Plant and Machinery - - - -	-	-	-	690		
TOTAL WILLIAM YARD - - - -	-	-	-		1,550	—
TOTAL VICTUALLING ESTABLISH- MENTS AT HOME - - - - }	-	-	-	-	6,700	
M.—MEDICAL ESTABLISHMENTS AT HOME.						
HASLAR:						
Works under 500 <i>l.</i> each - - - - { For details, Repairs and Maintenance of Build- ings - - - - - { see App., pp. 176 - - - - - { and 177. }	-	-	-	390		
	-	-	-	2,400		
TOTAL Works and Buildings - - - -	-	-	-	2,790		
Repairs to Plant and Machinery - - - -	-	-	-	800		
TOTAL HASLAR HOSPITAL - - - -	-	-	-		3,590	—
PLYMOUTH:						
Works under 500 <i>l.</i> each - - - - { For details, Repairs and Maintenance of Build- ings - - - - - { see App., pp. 176 - - - - - { and 177. }	-	-	-	300		
	-	-	-	880		
					1,180	—
YARMOUTH:						
Works under 500 <i>l.</i> each - - - - { For details, Repairs and Maintenance of Build- ings - - - - - { see App., pp. 176 - - - - - { and 177. }	-	-	-	1,280		
	-	-	-	1,000		
					2,280	—
TOTAL MEDICAL ESTABLISH- MENTS AT HOME - - - - }	-	-	-	-	7,050	
N.—MARINE BARRACKS:						
DEPTFORD:						
Repairs and Maintenance of Buildings { For details, - - - - - { see App., p. 177. }	-	-	-	-	100	—
WOOLWICH:						
Quarters for 100 Married Marines - - - -	10,000	-	-	3,000	-	7,000
Repairs and Maintenance of Buildings { For details, - - - - - { see App., p. 177. }	-	-	-	750		
					3,750	—

Carried forward - - - £. 623,218

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Expended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	623,218	—
MARINE BARRACKS— <i>continued</i> - - -	-	-	-	-	3,850	—
CHATHAM:						
Boundary Walls and New Entrances - - -	-	-	-	1,000		
Other Works under 500 <i>l.</i> each - } For details, see App., pp. 176. and 177. }	-	-	-	150		
Repairs and maintenance of Buildings }	-	-	-	700	1,850	—
PORTSMOUTH:						
Forton Barracks:						
Filling up the Mill Pond at Forton - - -	6,400	5,000	4,766	1,400		
Enlargement of Quartermaster's Stores - - -	-	-	-	750		
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	1,510		
TOTAL Works and Buildings - - -	-	-	-	3,660		
Repairs to Plant and Machinery - - -	-	-	-	50		
TOTAL FORTON BARRACKS - - -	-	-	-	-	3,710	—
ROYAL MARINE ARTILLERY BARRACKS (EASTNEY):						
Schools and residences - - -	5,000	2,000	-	2,000*	-	2,000
Forming Parade, Boundary Walls, &c. - - -	-	-	-	2,000		
Other Works under 500 <i>l.</i> each - } For details, see App., pp. 176. and 177. }	-	-	-	350		
Repairs and maintenance of Buildings }	-	-	-	800	5,150	—
PLYMOUTH:						
Constructing additional Barrack Accommodation -	180,000	161,000	151,114	5,000	-	20,000
Schools and residences - - -	3,000	1,000	-	1,000	-	1,000
Other Works under 500 <i>l.</i> each - } For details, see App., pp. 176. and 177. }	-	-	-	440		
Repairs and maintenance of Buildings }	-	-	-	800	7,240	—
MILL BAY BARRACKS (PLYMOUTH):						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	200	—
Carried forward - - -				£.	623,218	

* Re-vote, 1,000 *l.*

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Expended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	623,218	—
MARINE BARRACKS— <i>continued</i> - - -	-	-	-	-	22,000	—
DEAL DEPÔT:						
Schoolroom and Quartermasters' Stores, to complete -	-	-	-	630		
Other works under 500 <i>l.</i> each - { For details, see App., pp. 176	-	-	-	410		
Repairs and maintenance of Buildings { and 177. }	-	-	-	600	1,640	—
TOTAL MARINE BARRACKS - - -	-	-	-	-	23,640	—
O.—MARINE INFIRMARIES:						
WOOLWICH:						
Repairs and Maintenance of Build- { For details, ings - - - - - } see App., p. 177. }	-	-	-	-	1,000	—
CHATHAM:						
Repairs and Maintenance of Build- { For details, ings - - - - - } see App., p. 177. }	-	-	-	-	460	—
TOTAL MARINE INFIRMARIES - - -	-	-	-	-	1,460	—
P.—COAST GUARD:						
Purchase and Erection of Buildings - - -	-	-	-	13,500		
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	6,500	20,000	—
Q.—ADMIRALTY, WHITEHALL, AND SOMERSET HOUSE:						
General Repairs and Alterations to the Public Offices and Official Residences, also Packing Cases, Models, and Office Furniture - - - }	-	-	-	-	6,000	—
R.—NAVAL ESTABLISHMENTS ABROAD:						
GIBRALTAR:						
Extension of the Mole for improving the Harbour -	122,500	88,857	79,428	4,000	-	36,000
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	240		
TOTAL Works and Buildings - - -	-	-	-	4,240		
Repairs to Plant and Machinery - - -	-	-	-	101		
TOTAL GIBRALTAR - - -	-	-	-	-	4,341	—
Carried forward - - - £.					674,318	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Expended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	674,318	—
NAVAL ESTABLISHMENTS ABROAD— <i>continued</i> -	-	-	-	-	4,341	
MALTA:						
For the construction of a Dock and connection with the Dockyard - - - - -	120,000	63,000	44,905	30,000	-	20,000
Foundations for Machinery - - - - -	-	-	-	100		
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	840		
TOTAL Works and Buildings - - -	-	-	-	30,940		
New Machinery - - - - -	-	-	-	930		
Repairs to Plant and Machinery - - - - -	-	-	-	770		
TOTAL Machinery - - - - -	-	-	-	1,700		
TOTAL MALTA - - -	-	-	-	-	32,640	—
BERMUDA:						
For a Floating Dock - - - - -	250,000	162,000	171,735	60,000		
Foundations for Machinery - - - - -	-	-	-	410		
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	1,150		
TOTAL Works and Buildings - - -	-	-	-	61,560		
New Machinery - - - - -	-	-	-	1,350		
Repairs to Plant and Machinery - - - - -	-	-	-	647		
Total Machinery - - -	-	-	-	1,997		
TOTAL BERMUDA - - -	-	-	-	-	63,557	—
Carried forward - - -				£.	674,318	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Expended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	674,318	-
NAVAL ESTABLISHMENTS ABROAD— <i>continued</i> -	-	-	-	-	100,538	-
HALIFAX:						
Removing Coal Stores to new Site and altering Coal Wharf - - - - -	1,300	640	449	190	-	420
New Smithery - - - - -	-	-	-	500	-	-
Foundations for Machinery - - - - -	-	-	-	420	-	-
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	1,500	-	-
TOTAL Works and Buildings - - -	-	-	-	2,610	-	-
New Machinery - - - - -	-	-	-	671	-	-
TOTAL HALIFAX - - -	-	-	-	-	3,281	-
JAMAICA:						
Works under 500 l. each - - - { For details, see App. pp. 176 and 177. }	-	-	-	250	-	-
Repairs and maintenance of Buildings { } - - -	-	-	-	510	-	-
TOTAL JAMAICA YARD - - -	-	-	-	-	760	-
ANTIGUA:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	190	-
BARBADOES:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	110	-
ASCENSION:						
Reservoirs and Tanks - - - - -	-	-	-	630	-	-
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	300	-	-
					930	-
VANCOUVER'S ISLAND (ESQUIMALT).						
Reservoir, &c., for extinguishing Fire - - -	-	-	-	600	-	-
Foundations for Machinery - - - - -	-	-	-	150	-	-
Other Works under 500 l. each - - - { For details, see App., pp. 176 and 177. }	-	-	-	990	-	-
Repairs and maintenance of Buildings { } - - -	-	-	-	270	-	-
					2,010	-
Carried forward - - -	£.			£.	674,318	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Expended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	-	-	-	-	674,318	—
NAVAL ESTABLISHMENTS ABROAD— <i>continued</i> -	-	-	-	-	107,819	—
CAPE OF GOOD HOPE:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	420	—
TRINCOMALEE:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	470	—
HONG KONG AND KOWLOON:						
Rebuilding Sea Wall at Kowloon, damaged by Ty- phoon - - - - -	-	-	-	1,310		
Foundations for Machinery - - - - -	-	-	-	200		
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	350		
TOTAL Works and Buildings - - -	-	-	-	1,860		
New Machinery - - - - -	-	-	-	500		
TOTAL Hong Kong and Kowloon - - -	-	-	-	-	2,360	
TOTAL NAVAL ESTABLISHMENTS ABROAD - - - - -	-	-	-	-	111,069	—
S.—VICTUALLING ESTABLISHMENTS ABROAD:						
GIBRALTAR:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	160	—
MALTA:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	320	—
HALIFAX:						
New Victualling Store, &c. - - - - -	-	-	-	1,000		
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	180		
					1,180	—
CAPE OF GOOD HOPE:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	-	-	-	-	100	—
TOTAL VICTUALLING ESTABLISH- MENTS ABROAD - - - - -	-	-	-	-	1,760	—
Carried forward - - -				£.	787,147	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—continued.

DESCRIPTION OF WORKS for each Establishment.	1.	2.	3.	4.		5.
	TOTAL ESTIMATE for the Work.	AMOUNT already Voted for it.	GROSS SUM already Expended upon it. (Posted to 31 Dec. 1867.)	VOTE REQUIRED for the ensuing Year, 1868-69.		Further ESTIMATE for completing the Work.
	£.	£.	£.	£.	£.	£.
Brought forward - - -	- - -	- - -	- - -	- - -	787,147	—
T.—MEDICAL ESTABLISHMENTS ABROAD.						
LISBON:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	- -	- -	- -	- -	100	—
MALTA:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	- -	- -	- -	- -	690	—
BERMUDA:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	- -	- -	- -	- -	500	—
JAMAICA:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	- -	- -	- -	- -	140	—
VANCOUVER'S ISLAND (ESQUIMALT):						
Works under 500 l. each - - - { For details, see App., pp. 176	- -	- -	- -	250	—	—
Repairs and maintenance of Buildings } and 177. }	- -	- -	- -	320	—	—
					570	
CAPE OF GOOD HOPE:						
Repairs and maintenance of Buildings { For details, see App., p. 177. }	- -	- -	- -	- -	100	—
YOKOHAMA:						
Permanent Hospital - - - - -	25,000	- -	- -	1,000	- -	24,000
Repairs and maintenance of Sick { For details, Quarters - - - - - { see App., p. 177. }	- -	- -	- -	150	—	—
					1,150	
TOTAL MEDICAL ESTABLISHMENTS ABROAD - - - - -	- -	- -	- -	- -	3,250	—
V.—CONTINGENCIES FOR WORKS AND REPAIRS - - - - -						
	- -	- -	- -	- -	10,000	—
W.—ADD FOR TEMPORARY SU- PERINTENDENCE - - - { For details, see App., p. 178. }						
	- -	- -	- -	- -	13,840	—
TOTAL - - -				£.	814,237	

Vote 11.—NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS—*continued.*

ABSTRACT.

	WORKS AND BUILDINGS.				MACHINERY.	TOTAL.
	Under Superintendence of the Director of Works.				Under Superintendence of the Controller of the Navy.	
	<i>Extensions of the Dockyards and other Establishments.</i>	<i>Other Works and Buildings.</i>	<i>Repairs.</i>	TOTAL.		
	£.	£.	£.	£.	£.	£.
NAVAL YARDS AT HOME - - -	442,000	57,730	33,540	533,270	70,198	603,468
NAVAL YARDS ABROAD - - -	94,000	5,750	6,350	106,100	4,969	111,069
VICTUALLING YARDS AT HOME - -	- -	- -	3,560	3,560	3,140	6,700
VICTUALLING YARDS ABROAD - -	- -	1,000	760	1,760	- -	1,760
MEDICAL ESTABLISHMENTS AT HOME -	- -	1,970	5,740	7,710	800	8,510
MEDICAL ESTABLISHMENTS ABROAD -	1,000	250	2,000	3,250	- -	3,250
MARINE BARRACKS - - - -	15,400	2,730	5,460	23,590	50	23,640
COAST GUARD BUILDINGS - - -	- -	13,500	6,500	20,000	- -	20,000
PLYMOUTH BREAKWATER - - -	- -	3,500	2,500	6,000	- -	6,000
ADMIRALTY OFFICES - - - -	- -	- -	6,000	6,000	- -	6,000
TEMPORARY SUPERINTENDENCE - -	13,840	- -	- -	13,840	- -	13,840
CONTINGENCIES - - - -	- -	10,000	- -	10,000	- -	10,000
TOTAL FOR 1868-69 - - -	566,240	96,430	72,410	735,080	79,157	814,237
LAST VOTE FOR 1867-68 - - -	617,650	106,590	73,750	797,990	90,598	888,588
DECREASE - - - £.	51,410	10,160	1,340	62,910	11,441	74,351

VOTE 12.

MEDICINES AND MEDICAL STORES, &c.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the EXPENSE of MEDICINES and MEDICAL STORES, &c.

Seventy-eight Thousand One Hundred and Sixty-four Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—HOSPITAL AND INFIRMARY PROVISIONS AND STORES - -	38,564	38,064	500	—
B.—MEDICINES AND SURGICAL INSTRUMENTS - - - -	8,500	8,500	—	—
C.—SUBSISTENCE, &c., OF SEAMEN AT SICK QUARTERS, &c. - -	16,100	16,100	—	—
D.—EXPENSE OF CARRYING OUT CONTAGIOUS DISEASES ACT, &c. - - - - -	12,500	16,500	- - -	4,000
E.—MISCELLANEOUS DISBURSEMENTS, MEDICAL SERVICE - -	2,500	1,500	1,000	—
£.	78,164	80,664	1,500	4,000
NET DECREASE - - - £. 2,500.				

III. DETAILS of the above.

	REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
	£.	s.	d.	£.	s.	d.
A.—HOSPITAL AND INFIRMARY PROVISIONS AND STORES:						
For Provisions and Stores of all kinds, including Issues from Naval and Victualling Depôts, for the several Naval Hospitals and Marine Infirmaries - - - - -	38,564	-	-	38,064	-	-
B.—MEDICINES AND SURGICAL INSTRUMENTS:						
For Medicines and Surgical Instruments - - - - -	8,500	-	-	8,500	-	-
C.—SUBSISTENCE, &c., OF SEAMEN AT SICK QUARTERS, &c.:						
For the Subsistence and Care of Seamen at Sick Quarters and in Temporary Hospitals, and for other occasional Accommodation for the Sick:						
For the Fleet - - - - -			£. 5,100			
For Coast Guard and Royal Naval Reserve - - - - -			11,000			
	16,100	-	-	16,100	-	-
D.—EXPENSE OF CARRYING OUT CONTAGIOUS DISEASES ACT, &c.:						
For the purpose of carrying out the Contagious Diseases Act of 1866; for Contributions for Lock Wards at the Out-Ports; and for Establishing and Maintaining Lock Beds at Naval Stations in the Colonies	12,500	-	-	16,500	-	-
E.—MISCELLANEOUS DISBURSEMENTS, MEDICAL SERVICE:						
For freight of Medical Stores, Funerals of Seamen, and other Miscellaneous Disbursements for Medical Service - - - - -	2,500	-	-	1,500	-	-
TOTAL - - - £.	78,164	-	-	80,664	-	-

VOTE 13.

MARTIAL LAW AND LAW CHARGES.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the EXPENSE of MARTIAL LAW and LAW CHARGES.

Twenty Thousand Three Hundred and Sixty-five Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—LEGAL DEPARTMENT - - - - -	13,014	14,014	- -	1,000
B.—COURTS MARTIAL - - - - -	1,500	1,500	—	—
C.—NAVAL PRISON, LEWES - - - - -	2,891	2,858	33	—
D.—DITTO - - MALTA - - - - -	1,760	1,760	—	—
E.—CONVEYANCE OF PRISONERS - - - - -	1,200	1,200	—	—
£.	20,365	21,332	33	1,000

NET DECREASE - - - £. 967.

III. DETAILS of the above.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
A.—LEGAL DEPARTMENT:		
Advocate General of the Office of Lord High Admiral (in addition to Fees) - - - - -	13 6 8	13 6 8
Counsel and Judge Advocate for the affairs of the Admiralty and Navy (in addition to Fees) - - - - -	100 - -	100 - -
Solicitor for the Admiralty - - - - -	1,600 - -	1,600 - -
Solicitor for an Office, and assistance of Clerks - - - - -	1,300 - -	1,300 - -
Fees to Counsel, and personal Charges of Law Agents employed by the Solicitor on Admiralty business - - £.6,000 - -		
Expenses attendant on the Purchase of Property, and other Legal Proceedings connected with Naval business 4,000 13 4	10,000 13 4	11,000 13 4
£.	13,014 - -	14,014 - -
B.—COURTS MARTIAL:		
Allowances to persons officiating at Courts Martial on Officers, Seamen, and Marines, Travelling Charges, and other Expenses attendant thereon - - - - -	1,500 - -	1,500 - -

VOTE 13.—MARTIAL LAW AND LAW CHARGES—*continued.*

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
	£. s. d.	£. s. d.
C.—NAVAL PRISON, LEWES:		
Governor,* from 350 l. to 400 l. per annum - - - - -	381 - -	376 - -
Chaplain* - - - - -	200 - -	200 - -
Local Medical Practitioner - - - - -	100 - -	100 - -
Pay of Warders, Assistant Warders, Schoolmaster, Messengers, &c. -	1,329 - -	1,326 - -
Lodging Money to those of the above unprovided with quarters - -	164 - -	164 - -
Allowance in lieu of a House to the Chaplain - - - - -	50 - -	50 - -
Rates and Taxes - - - - -	30 - -	30 - -
Lighting the Prison with Gas - - - - -	50 - -	50 - -
Allowances for Clothing to Warders, &c. - - - - -	130 - -	75 - -
Allowance to Roman Catholic Priest - - - - -	26 - -	26 - -
Fuel, Lights, &c. - - - - -	181 - -	181 - -
Postage, Advertisements, and other Contingencies - - - - -	120 - -	120 - -
Clothing for Prisoners - - - - -	130 - -	160 - -
£.	2,891 - -	2,858 - -
D.—NAVAL PRISON, MALTA:		
Governor * - - - - -	300 - -	1,760 - -
Allowance to the Chaplain of Malta Naval Yard for Spiritual Charge of the Prisoners - - - - -	50 - -	
Allowance to the Medical Officers of H.M.S. "Hibernia" for Services in connexion with the Prisoners - - - - -	50 - -	
Clerk and Storekeeper - - - - -	91 - -	
Pay of Warders, Assistant Warders, Gatekeeper, Messengers, &c. - -	834 - -	
Lodging Money to Warders, &c. unprovided with quarters - - -	37 - -	
Allowances for Clothing to Warders, &c. - - - - -	65 - -	
Fuel and Lights - - - - -	120 - -	
Postage, Boat hire, and other Contingencies - - - - -	63 - -	1,760 - -
Clothing for Prisoners - - - - -	150 - -	
£.	1,760 - -	1,760 - -
E.—CONVEYANCE OF PRISONERS:		
Expense of conveying Prisoners between Lewes Prison and County Gaols, and Her Majesty's Ships - - - - -	1,200 - -	1,200 - -

* In addition to Half Pay.

VOTE 14.

MISCELLANEOUS SERVICES.

I. ESTIMATE of the Sum which will be required, in the Year ending 31st March 1869, to defray the EXPENSE of various MISCELLANEOUS SERVICES.

One Hundred and Seventy-five Thousand Eight Hundred Pounds.

II. SUB-HEADS under which this VOTE will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—PILOTING AND TOWING HER MAJESTY'S SHIPS - - -	9,000	9,000	—	—
B.—COMMANDERS IN CHIEF, EXPENSES ATTENDANT ON - -	4,000	4,000	—	—
C.—PASSAGE MONEY AND CONVEYANCE OF OFFICERS, SEAMEN, AND MARINES - - - - -	55,000	55,000	—	—
D.—TELEGRAPHIC COMMUNICATIONS, EXPENSE OF - - -	6,000	6,000	—	—
E.—COMPENSATION TO OFFICERS, &c., FOR LOSSES BY SHIP- WRECK, &c. - - - - -	3,000	1,500	1,500	—
F.—CONTRIBUTIONS IN AID OF SAILORS' HOMES - - - -	525	425	100	—
G.—DITTO - - - - - RELIGIOUS AND CHARITABLE INSTITUTIONS - - - - -	1,500	1,500	—	—
H.—PER-CENTAGE TO BANKS ON MONEY REMITTED TO NAVAL ACCOUNTANTS - - - - -	1,500	1,500	—	—
I.—MAINTENANCE OF A FLOATING LIGHT VESSEL AT THE WARNER - - - - -	370	370	—	—
K.—MEDALS FOR SEAMEN AND MARINES - - - - -	100	100	—	—
L.—REWARDS FOR SERVICES AGAINST PIRATES - - - -	2,000	2,200	—	200
M.—STAMPS ON CONTRACTS AND ON OFFICERS' COMMISSIONS, &c.	7,000	4,000	3,000	—
N.—HIRE OF SHIPS AND VESSELS - - - - -	200	200	—	—
O.—ASSISTANCE RENDERED TO HER MAJESTY'S SHIPS WHEN IN DISTRESS - - - - -	500	500	—	—
P.—COMPENSATION FOR DAMAGE DONE BY HER MAJESTY'S SHIPS - - - - -	4,000	4,000	—	—
Q.—GRATUITIES FOR WOUNDS AND SPECIAL SERVICES - -	5,000	4,000	1,000	—
R.—EXPENSE OF COMMITTEES - - - - -	3,000	2,000	1,000	—
S.—COMPENSATION TO OWNERS OF MERCHANT VESSELS FOR PROVIDING SUBSTITUTES FOR VOLUNTEERS - - - -	150	250	—	100
T.—BOOKS AND STATIONERY FOR SCHOOLS, &c. - - - -	3,500	3,500	—	—
V.—LOSS BY EXCHANGE, &c. - - - - -	4,000	4,000	—	—
W.—LODGING ALLOWANCES TO OFFICERS, &c., OF HER MA- JESTY'S SHIPS - - - - -	7,000	4,000	3,000	—
X.—SLAUGHTER HOUSES, PEMBROKE DOCK - - - - -	—	500	—	500
Y.—GRAVING DOCK IN TABLE BAY - - - - -	—	2,450	—	2,450
Z.—IRON-CLAD SHIP FOR VICTORIA, NEW SOUTH WALES -	50,000	50,000	—	—
A. 1.—NAVAL SAVINGS BANKS - - - - -	1,000	—	1,000	—
A. 2.—MISCELLANEOUS PAYMENTS AND ALLOWANCES - -	7,455	7,455	—	—
£.	175,800	168,450	10,600	3,250

NET INCREASE - - - £. 7,350.

VOTE 14.—MISCELLANEOUS SERVICES—*continued.*

III.

DETAILS of the foregoing.

	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
A.—PILOTING AND TOWING HER MAJESTY'S SHIPS:	£. s. d.	£. s. d.
For Pilotage of Her Majesty's Ships on Home and Foreign Stations; Half day-pay to Pilots, Travelling and other incidental Expenses in piloting and towing Ships - - - - -	9,000 - -	9,000 - -
B.—COMMANDERS IN CHIEF:		
For Furniture, Postage, Stationery, Wages of Attendants, and other Expenses - - - - -	4,000 - -	4,000 - -
C.—PASSAGE MONEY AND CONVEYANCE OF OFFICERS, SEAMEN, AND MARINES:		
For the Passage and Travelling Expenses of Naval and Marine Officers proceeding to, and of Invalid Officers returning from, their Ships on Foreign Stations; and of Civil Officers proceeding to, and returning from, Service Abroad; also for the Conveyance of Seamen and Marines to and from their Ships or Divisions; and for the Passage and Conveyance of Invalids - - - - -	55,000 - -	55,000 - -
D.—TELEGRAPHIC COMMUNICATIONS:		
For Electric Telegraph from the Admiralty to Somerset House; and to the several Dockyards, as per Contracts; also, for casual Tele- graphic Communications, &c. - - - - -	6,000 - -	6,000 - -
E.—COMPENSATION TO OFFICERS, &c. FOR LOSSES BY SHIPWRECK, &c.:		
For Compensation to Officers, Seamen, &c. for Losses by Shipwreck or Action, pursuant to the recommendation of the Committee for Naval and Military Inquiry - - - - -	3,000 - -	1,500 - -
F.—CONTRIBUTIONS IN AID OF SAILORS' HOMES:		
For Contributions in aid of Sailors' Homes in the Neighbourhood of Naval Establishments - - - - -	525 - -	425 - -
G.—CONTRIBUTIONS IN AID OF RELIGIOUS AND CHARITABLE INSTITUTIONS:		
For Contributions in aid of Religious and Charitable Institutions in the Neighbourhood of Naval Establishments - - - - -	1,500 - -	1,500 - -
H.—PER-CENTAGE TO BANKS ON MONEY REMITTED TO NAVAL ACCOUNTANTS:		
For Per-centage paid to Banks for transmission of Money to the Naval Accountants at the Out-ports and other Home Establishments, to meet Payments for the Naval Department - - - - -	1,500 - -	1,500 - -
I.—MAINTENANCE OF A FLOATING LIGHT VESSEL AT THE WARNER:		
For Annual Payment to the Elder Brethren of the Trinity House for the maintenance of a Floating Light Vessel at the Warner - - -	370 - -	370 - -
K.—MEDALS FOR SEAMEN AND MARINES:		
For Medals to Seamen and Marines as Rewards for Good Service and Distinguished Gallantry in Action - - - - -	100 - -	100 - -
L.—REWARDS FOR SERVICES AGAINST PIRATES:		
For Rewards for Services against Pirates (under Act 13 & 14 Vict. c. 26), viz. :— To Commanders, Officers, and Crews of H. M. S. "Osprey" and "Opossum," for Services against Pirates in the China Seas, on the 18th July 1866 - - - - -	2,000 - -	2,200 - -
M.—STAMPS ON CONTRACTS, &c.:		
For Stamps on Contracts, and on Officers' Commissions and Appoint- ments, Advertisements, Gazettes, Lists, &c. - - - - -	7,000 - -	4,000 - -
N.—HIRE OF SHIPS AND VESSELS:		
For the occasional Hire of Steamers and other small Vessels - - -	200 - -	200 - -
Carried forward - - - £.	90,195 - -	85,795 - -

VOTE 14.—MISCELLANEOUS SERVICES—*continued.*

	REQUIRED for the Service of the Year 1868/69.			LAST VOTE for the Financial Year 1867/68.		
	£.	s.	d.	£.	s.	d.
Brought forward - - -	90,195	-	-	85,795	-	-
O.—ASSISTANCE RENDERED TO HER MAJESTY'S SHIPS, &c.:						
For Assistance rendered to Her Majesty's Ships in Distress - -	500	-	-	500	-	-
P.—COMPENSATION FOR DAMAGE DONE BY HER MAJESTY'S SHIPS:						
For Remuneration for Damage done by Her Majesty's Ships - -	4,000	-	-	4,000	-	-
Q.—GRATUITIES FOR WOUNDS AND FOR SPECIAL SERVICES:						
For Gratuities for Wounds and Injuries received in the Service; to Persons on Retirement or Discharge from the Public Service, not entitled to Pension; Compassionate Allowances, and Gratuities for Special Services - - - - -	5,000	-	-	4,000	-	-
R.—EXPENSE OF COMMITTEES:						
For Expenses connected with the Appointment of Committees to in- vestigate or report on Matters relating to the Naval Department -	3,000	-	-	2,000	-	-
S.—COMPENSATION TO OWNERS OF MERCHANT VESSELS FOR PROVIDING SUBSTITUTES FOR VOLUNTEERS:						
For Compensation to the Owners of Merchant Vessels for Excess of Wages paid by them in providing Substitutes for Seamen who volun- teer into Her Majesty's Navy (Act 16 & 17 Vict. c. 131) - - -	150	-	-	250	-	-
T.—BOOKS AND STATIONERY FOR SCHOOLS, &c.:						
For Allowances for the purchase of Books and Stationery for Schools on board Her Majesty's Ships and Training Ships; and for Allowances to purchase Stationery for Captains and Paymasters of Her Majesty's Ships	3,500	-	-	3,500	-	-
V.—LOSS BY EXCHANGE, &c.:						
For Net Loss by Exchange incurred from Payments made by Paymasters on the East India and China Station, &c.; and Discount on Bills drawn	4,000	-	-	4,000	-	-
W.—LODGING ALLOWANCES TO OFFICERS, &c., OF HER MAJESTY'S SHIPS:						
For Allowances for Lodging to Officers and Crews of Her Majesty's Ships detained on Shore by Stress of Weather, or on Special Service	7,000	-	-	4,000	-	-
X.—SLAUGHTER HOUSES, PEMBROKE DOCK:						
For New Slaughter Houses at Pembroke Dock, to replace those at present situated on Admiralty Property at that place - - -	-	-	-	500	-	-
Y.—GRAVING DOCK IN TABLE BAY:						
For Grant towards the Construction of a Graving Dock in Table Bay	-	-	-	2,450	-	-
Z.—IRON-CLAD SHIP FOR VICTORIA, NEW SOUTH WALES:						
For Moiety of a Contribution of 100,000 <i>l.</i> towards building an Iron-clad two-turreted Ship for the defence of the Colony of Victoria, New South Wales - - - - -	50,000	-	-	50,000	-	-
A. 1.—NAVAL SAVINGS BANKS:						
For Interest on Deposits in Naval Savings Banks, and for Extra Pay of Non-Commissioned Officers of Royal Marines acting as Savings Bank Clerks - - - - -	1,000	-	-	-	-	-
A. 2.—MISCELLANEOUS PAYMENTS AND ALLOWANCES:						
For Freight of Specie; Wages of Interpreters; Conveyance by Sea of the Royal Household; clearing Ships of Ashes; and other small or unforeseen Expenses - - - - - (For details of Expenditure of Contingencies in 1866-67, see Appendix, No. 21, p. 179.)	7,455	-	-	7,455	-	-
TOTAL - - - £.	175,800	-	-	168,450	-	-

VOTE 15.

HALF PAY, RESERVED HALF PAY, AND RETIREMENT TO OFFICERS OF THE
NAVY AND ROYAL MARINES.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expense of HALF PAY, RESERVED AND RETIRED PAY

Seven Hundred Thousand One Hundred and Sixty-six Pounds.

II. HEAD under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A.—HALF PAY, RESERVED AND RETIRED PAY - - -	700,166	704,937	- -	4,771
NET DECREASE - - £. 4,771				

III. DETAILS of the above.

Number unemployed on 1 Jan. 1868.	RANK.	Rate of Half Pay or Retirement.		TOTAL of each Class. (365 Days.)	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		Daily.	Annual.			
ACTIVE LIST.						
		£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
3	Admirals of the Fleet	3 7 -	1,222 15 -	3,668 5 -		
18	Admirals	2 2 -	766 10 -	13,797 10 -		
20	Vice-Admirals	1 12 6	593 2 6	11,862 10 -		
41	Rear-Admirals	1 5 -	456 5 -	18,706 5 -		
82					48,084 - -	48,302 17 -
23	Captains	- 14 6	264 12 6	6,086 7 6		
54	Ditto	- 12 6	228 2 6	12,318 15 -		
100	Ditto	- 10 6	191 12 6	19,162 10 -		
177					37,567 12 6	38,137 4 -
87	Commanders	- 10 -	182 10 -	15,877 10 -		
128	Ditto	- 8 6	155 2 6	19,856 - -		
215					35,733 10 -	35,868 - -
176	Lieutenants	{ From 8 6 to - 4 - Average 5s. 1d. }	92 15 5	16,327 13 4	16,327 13 4	16,924 9 -
83	Staff Commanders and Navigating Lieutenants	{ From 15 6 to - 5 - Average 8s. 2d. }	149 - 10	12,370 9 2	12,370 9 2	13,301 1 -
4	Sub-Lieutenants	- 2 6	45 12 6	182 10 -	182 10 -	183 - -
3	Navigating Sub-Lieutenants	- 2 6	45 12 6	196 17 6	196 17 6	45 15 -
34	Chaplains	{ From 17 - to - 5 - Average 7s. 8d. }	139 18 4	4,757 3 4	4,757 3 4	3,936 - 6
2	Inspectors General of Hospitals	1 17 6	684 7 6	1,368 15 -		
1	Ditto ditto	1 10 -	547 10 -	547 10 -		
2	Deputy ditto	1 1 -	383 5 -	766 10 -		
5					2,682 15 -	3,074 8 -
779			Carried forward - - - £.		157,792 10 10	159,772 14 6

Vote 15.—HALF PAY, RESERVED HALF PAY, and RETIREMENT to OFFICERS of the NAVY and ROYAL MARINES—*continued.*

Number unemployed on 1 Jan. 1868.	RANK.	Rate of Half Pay or Retirement.		TOTAL of each Class. (365 Days.)	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		Daily.	Annual.			
		£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
	ACTIVE LIST—continued.					
779	- - - Brought forward - - -	- - -	- - -	- - -	157,792 10 10	159,772 14 6
61	Staff Surgeons and Surgeons - - -	{ From 18 6 to - 11 - Average 14 s. 8 d. }	267 13 4	16,327 13 4	16,327 13 4	19,844 16 6
24	Assistant Surgeons - - -	{ From 10 - to - 6 - Average 7 s. 6 d. }	136 17 6	3,285 - -	3,285 - -	2,623 - -
1	Secretary - - -	- 17 -	310 5 -	310 5 -		
	For Four Secretaries on Full Pay allowed 5 s. a day out of their Half-pay - }	- 5 -	91 5 -	365 - -	675 5 -	988 4 -
109	Paymasters - - -	{ From 14 - to - 5 - Average 9 s. 7 d. }	174 17 11	19,063 12 11		
	For 14 Paymasters on Full Pay as Secretaries allowed 5 s. a day out of their Half-pay - }	- 5 -	91 5 -	1,277 10 -	20,341 2 11	21,305 15 6
5	Assistant Paymasters - - -	- 2 6	45 12 6	228 2 6	228 2 6	274 10 -
4	Naval Instructors - - -	{ From 10 - to - 3 - Average 8 s. - d. }	146 - -	584 - -	584 - -	750 6 -
1	Inspector of Machinery - - -	- 10 -	182 10 -	182 10 -		
1	Ditto - - -	- 8 -	146 - -	146 - -	328 10 -	183 - -
2						
37	Chief Engineers - - -	{ From 13 - to - 5 - Average 7 s. 9 d. }	141 8 9	5,232 15 5	5,232 15 5	4,440 13 6
1,022						
TOTAL ACTIVE LIST - - - £.					204,795 - -	210,183 - -
RESERVED LIST.						
(Under Her Majesty's Orders in Council of 25 June 1851 and 29 December 1853.)						
4	Admirals - - -	£. s. d.	£. s. d.	£. s. d.		
3	Ditto - - -	2 2 -	766 10 -	3,066 - -		
3	Vice-Admirals - - -	1 12 6	593 2 6	1,779 7 6		
10	In receipt of Retired Service Pensions - }	1 12 6	593 2 6	1,779 7 6	6,624 15 -	6,642 18 -
2	Admirals - - -	2 2 -	766 10 -	1,533 - -		
28	Ditto - - -	1 5 -	456 5 -	12,775 - -		
39	Vice-Admirals - - -	1 5 -	456 5 -	17,793 15 -		
25	Rear-Admirals - - -	1 5 -	456 5 -	11,406 5 -	43,508 - -	45,457 4
94						
53	Captains - - -	{ Orders in Council, 25 June 1851, 30 January 1856, and 1 August 1860 }	From 16 9 to 10 6	305 13 9 191 12 6	11,661 15 -	18,011 15 6
71	Commanders - - -	{ Orders in Council, 25 June 1851, 30 January 1856, and 1 August 1860 }	From 12 9 to - 8 6	232 13 9 155 2 6	12,674 - -	13,875 10 6
1	Lieutenant - - -	- 7 -	127 15 -	127 15 -		
5	Ditto - - -	- 6 -	109 10 -	547 10 -		
1	Ditto - - -	- 4 -	73 - -	73 - -	748 5 -	951 12 -
7						
123	Staff Commanders and Navigating Lieutenants - - -	From 15 6 to 5 -	232 17 6 91 5 -	15,275 5 -	15,275 5 -	15,189 - -
358						
TOTAL RESERVED LIST - - - £.					90,492 - -	100,128 - -

Vote 15.—HALF PAY, RESERVED HALF PAY, and RETIREMENT to OFFICERS of the NAVY and ROYAL MARINES—continued.

Number on 1 Jan. 1868.	RANK.		Rate of Half Pay or Retirement.		TOTAL of each Class (365 Days.)	REQUIRED for the Service of the Year 1868-69.	LAST VOTE for the Financial Year 1867-68.
			Daily.	Annual.			
RETIRED LIST.							
(Under Admiralty Circular, 31 August 1846, and Her Majesty's Orders in Council, 10 August 1840, 25 June 1851, 30 January 1856, 1 August 1860, 9 July 1864, 16 February 1866, 24 March 1866, and 26 June 1867.)							
NAVAL OFFICERS.							
1	Admiral	In receipt of Greenwich Hospital Pensions (Order in Council, 16 February 1866) - - - -	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
3	Vice ditto		2 2 -	766 10 -	766 10 -		
2	Rear ditto		1 12 6	593 2 6	1,779 7 6		
6			1 5 -	456 5 -	912 10 -	3,458 7 6	3,156 15 -
9	Admirals	Retired from Active Flag List (Order in Council 24 March 1866) - - - -	2 2 -	766 10 -	6,898 10 -		
3	Vice ditto		1 12 6	593 2 6	1,779 7 6		
8	Rear ditto		1 5 -	456 5 -	3,650 - -	12,327 17 6	9,415 7 -
20							
25	Admirals	(Order in Council, 7 May 1858) - - - -	1 5 -	456 5 -	11,406 5 -		
16	Ditto		1 - -	365 - -	5,840 - -		
23	Vice ditto		1 - -	365 - -	8,395 - -	25,641 5 -	22,783 10 -
64							
20	Rear-Admirals	{ (with Pay of Retired Captain) - - - - }	1 - -	365 - -	7,300 - -	7,300 - -	11,712 - -
28	Rear-Admirals	{ (Order in Council, 1 August 1860, and 9 July 1864) - }	1 5 -	456 5 -	12,775 - -	12,775 - -	8,235 - -
16	Captains	(Orders in Council, 10 August 1840, 24 April 1847, 25 June 1851, 30 January 1856, and 26 June 1867) -	1 - -	365 - -	5,840 - -		
133	Ditto		- 10 6	191 12 6	25,486 2 6		
57	Ditto						
8	Ditto	(Orders in Council, 1 August 1860, 9 July 1864, and 23 March 1866) - - -	1 - -	365 - -	20,805 - -		
5	Ditto		- 18 -	328 10 -	2,628 - -		
1	Ditto		- 16 -	292 - -	1,460 - -		
220			- 14 6	264 12 6	264 12 6	56,483 15 -	54,131 8 -
158	Captains, from Commanders' List (Order in Council, 1 August 1860, 9 July 1864, and 24 March 1866) - - - -		From 17 9 to - 10 -	323 18 9 } 182 10 - }	35,482 11 3	35,482 11 3	33,841 5 6
28	Captains, late Staff Commanders (Orders in Council, 28 February 1855, 22 February 1860, and 26 June 1867) - - - -		From 1 3 6 to - 13 -	428 17 6 } 237 5 - }	8,833 - -	8,833 - -	5,755 7 -
32	Commanders (Orders in Council, 1 August 1860, and 9 July 1864) - - - -		From 16 3 to - 10 -	296 11 3 } 182 10 - }	7,035 7 6	7,035 7 6	6,501 1 6
100	Commanders (Order in Council, 30 January 1816) - - - -		- 8 6	155 2 6	15,512 10 -		
297	Commanders { (Orders in Council, 1 November 1830, and 9 July 1864) - - - - }		- 7 -	127 15 -	37,941 15 -		
41	Ditto - - - - ditto - - - -		- 6 -	109 10 -	4,489 10 -		
5	Ditto - - - - ditto - - - -		- 4 -	73 - -	365 - -	58,308 15 -	63,647 8 -
443							
247	Commanders, from Lieutenants' List (Orders in Council, 1 August 1860, 9 July 1864, and 24 March 1866) - - - -		From 14 6 to - 4 -	264 12 6 } 73 - - }	38,393 8 9	38,393 8 9	36,801 6 -
1,266	- - - -		- - -	- - -	Carried forward - - - £.	266,039 7 6	255,980 8 -

Vote 15.—HALF PAY, RESERVED HALF PAY, and RETIREMENT to OFFICERS of the NAVY and ROYAL MARINES—continued.

Number on 1 Jan. 1868.	RANK.	Rate of Half Pay or Retirement.		TOTAL of each Class. (365 Days.)	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		Daily.	Annual.			
RETIRED LIST—continued.						
	NAVAL OFFICERS—continued.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1,266	- - - - -	- - -	- - -	Brought forward - - -	266,039 7 6	255,980 8 -
	(Under Admiralty Circular, 31 August 1846, and Her Majesty's Orders in Council, 10 August 1840, 25 June 1851, 30 January 1856, 1 August 1860, 9 July 1864, 16 February 1866, 24 March 1866, and 26 June 1867)—continued.					
4	Commanders, late Navigating Lieutenants } (under Order in Council of 19 May 1846)	- 13 6	246 7 6	985 10 -		
3	Ditto - ditto - - - - -	- 12 6	228 2 6	684 7 6		
12	Ditto - ditto - - - - -	- 10 6	191 12 6	2,299 10 -	3,969 7 6	3,980 5 -
19						
1	Commanders, late Staff Commanders (under } Orders in Council of 28 February 1855, 22 February 1860, 26 June 1867) - - }	- 17 6	319 7 6	319 7 6		
2	Ditto - ditto - - - - -	- 15 6	282 17 6	565 15 -		
1	Ditto - ditto - - - - -	- 13 -	237 5 -	237 5 -	1,122 7 6	237 18 -
4						
1	Lieutenant { - - - - - }	- 7 3	132 6 3	132 6 3		
1	Ditto { (under Order in Council, 1 } August 1860) - - - - - }	- 7 -	127 15 -	127 15 -		
2	Ditto { - - - - - }	- 5 -	91 5 -	182 10 -	442 11 3	352 5 6
4						
1	Lieutenant (in Holy Orders) - - -	- 5 -	91 5 -	91 5 -	91 5 -	91 10 -
45	Chaplains - - - - -	{ From 15 3 to - 5 - }	278 6 3 } 91 5 - }	6,090 18 9	6,090 18 9	5,457 19 6
1	Medical Director General - - - - -	1 13 6	611 7 6	611 7 6	611 7 6	613 1 -
7	Inspectors General of Hospitals and Fleets {	From 1 17 6 to - 19 9 }	684 7 6 } 360 8 9 }	3,827 18 9	3,827 18 9	3,838 8 6
32	Deputy Inspector General of Hospitals and } Fleets - - - - - }	From 1 2 - to - 13 - }	401 10 - } 237 5 - }	10,749 5 -	10,749 5 -	9,296 8 -
2	Surgeons - - - - -	- 10 -	182 10 -	365 - -		
6	Ditto - - - - -	- 3 -	54 15 -	328 10 -	693 10 -	1,043 2 -
8						
157	Staff Surgeons and Surgeons (Unfit for fur- } ther Service) - - - - - }	From 18 6 to - 5 - }	337 12 6 } 91 5 - }	27,913 7 6	27,913 7 6	27,623 17 -
27	Assistant Surgeons - - - - -	{ From 10 - to - 3 - }	182 10 - } 54 15 - }	2,974 15 -	2,974 15 -	2,287 10 -
16	Naval Instructors - - - - -	{ From 10 - to - 3 - }	182 10 - } 54 15 - }	2,117 - -	2,117 - -	2,223 9 -
1	Paymaster-in-Chief (under Order in } Council, 9 July 1864) - - - - - }	- 17 -	310 5 -	310 5 -		
13	Paymasters-in-Chief (under Order in Coun- } cil, 5 April 1852, and 9 July 1864) - }	- 14 -	255 10 -	3,321 10 -	3,631 15 -	4,465 4 -
14						
117	Paymasters (under Order in Council, 1852) {	From 14 - to - 5 - }	255 10 - } 91 5 - }	17,985 7 6	17,985 7 6	16,643 17 -
11	Paymasters (pensioned from Civil Employ- } ment) - - - - - }	From 17 - to - 6 - }	310 5 - } 109 10 - }	1,624 5 -	1,624 5 -	1,884 18 -
14	Chief Engineers - - - - -	{ From 13 - to - 5 - }	237 5 - } 91 5 - }	2,463 11 3	2,463 11 3	2,232 19 6
1,743	- - - - -				352,348 - -	338,253 - -
TOTAL RETIRED LIST of NAVAL OFFICERS - - -				£.		

Vote 15.—HALF PAY, RESERVED HALF PAY, and RETIREMENT to OFFICERS of the NAVY and ROYAL MARINES—continued.

Number on 1 Jan. 1868.		R A N K.	Rate of Half-pay or Retirement.		TOTAL of each Class. (365 Days.)	REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
			Daily.	Annual.			
RETIRED LIST—continued.							
MARINE OFFICERS:			£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
General Officers on the Fixed Establishment, not being Colonels of Divisions.							
Artillery:							
1	Lieutenant-General	- - - - -	2 - -	730 - -	730 - -		
1	Major-General	- - - - -	2 - -	730 - -	730 - -		
Light Infantry:							
1	General	- - - - -	1 18 6	702 12 6	702 12 6		
5	Major-Generals	- - - - -	1 18 6	702 12 6	3,513 2 6	5,675 15 -	10,191 6 -
8							
Retired Full Pay:							
1	Lieutenant-General	- - - - -	2 5 -	821 5 -	821 5 -		
2	Major-Generals	- - - - -	2 - -	730 - -	1,460 - -		
14	Ditto	- - - - -	1 18 6	702 12 6	9,836 15 -		
2	Ditto	- - - - -	- - -	400 - -	800 - -		
4	Ditto	- - - - -	1 5 -	456 5 -	1,825 - -		
1	Ditto	- - - - -	1 - -	365 - -	365 - -		
3	Lieutenant-Colonels	- - - - -	- - -	400 - -	1,200 - -		
3	Ditto	- - - - -	1 - -	365 - -	1,095 - -		
16	Ditto	- - - - -	- 17 -	310 5 -	4,964 - -		
2	Captains	- - - - -	- 16 -	292 - -	584 - -		
6	Ditto	- - - - -	- 13 7	247 17 11	1,487 7 6		
1	Ditto	- - - - -	- 12 1	220 10 5	220 10 5		
29	Ditto	- - - - -	- 11 7	211 7 11	6,130 9 7		
6	Ditto	- - - - -	- 10 6	191 12 6	1,149 15 -		
2	First Lieutenants	- - - - -	- 7 6	136 17 6	273 15 -	32,212 17 6	31,422 5 6
92							
Reserved and Retired Half Pay:							
1	Colonel	- - - - -	- 14 6	264 12 6	264 12 6		
1	Lieutenant-Colonel	- - - - -	- 17 6	319 7 6	319 7 6		
1	Ditto	- - - - -	- 9 6	173 7 6	173 7 6		
2	Majors	- - - - -	- 8 4	152 1 8	304 3 4		
2	Ditto	- - - - -	- 7 4	133 16 8	267 13 4		
4	Ditto	- - - - -	- 7 -	127 15 -	511 - -		
9	Captains	- - - - -	- 7 4	133 16 8	1,204 10 -		
35	Ditto (one of these in Holy Orders)	- - - - -	- 7 -	127 15 -	4,471 - 10		
5	Quartermasters (under Order in Council of 25 June 1857)	- - - - -	- 10 -	182 10 -	912 10 -		
5	First Lieutenants	- - - - -	- 4 8	85 3 4	425 16 8		
44	Ditto	- - - - -	- 4 6	82 2 6	3,613 10 -		
2	Ditto	- - - - -	- 4 -	73 - -	146 - -		
1	Second Lieutenant	- - - - -	- 3 2	57 15 10	57 15 10		
36	Ditto (one of these in Holy Orders)	- - - - -	- 3 -	54 15 -	1,971 - -	14,642 7 6	14,759 8 6
148							
248	TOTAL RETIRED LIST of MARINE OFFICERS			£.	52,531 - -	56,373 - -	
On Half Pay.						REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
1 Jan. 1868.	1 Jan. 1867.	A B S T R A C T.				£. s. d.	£. s. d.
1,022	1,049	ACTIVE LIST of NAVAL OFFICERS				204,795 - -	210,183 - -
358	401	RESERVED LIST of - - Ditto				90,492 - -	100,128 - -
1,743	1,734	RETIRED LIST of - - Ditto				352,348 - -	338,253 - -
248	259	Ditto - - of MARINE OFFICERS				52,531 - -	56,373 - -
3,371	3,443	TOTAL - - £.				700,166 - -	704,937 - -

Vote 16.

MILITARY AND CIVIL PENSIONS AND ALLOWANCES.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expense of MILITARY and CIVIL PENSIONS and ALLOWANCES.

SECTION 1.—Five Hundred and Fifty Thousand Four Hundred and Forty-seven Pounds.

SECTION 2.—Two Hundred and Twenty-three Thousand Four Hundred and Ninety-eight Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
SECTION 1.—MILITARY PENSIONS.				
A.—PENSIONS FOR GOOD AND MERITORIOUS SERVICES - - - -	6,150	6,150	—	—
B.— DITTO FOR CONSPICUOUS BRAVERY - - - - -	190	190	—	—
C.—FLAG OFFICERS' RETIRED SERVICE PENSIONS - - - - -	1,500	1,500	—	—
D.—PENSIONS TO COMMISSIONED AND WARRANT OFFICERS - - -	40,595	38,811	1,784	—
E.— DITTO - TO WIDOWS AND RELATIVES OF OFFICERS SLAIN, &c. -	11,113	10,718	395	—
F.— DITTO - WIDOWS OF NAVAL OFFICERS - - - - -	154,060	154,029	31	—
G.— DITTO - - DITTO MARINE OFFICERS - - - - -	11,396	11,534	—	138
H.—COMPASSIONATE LIST - - - - -	15,500	15,500	—	—
I.—PENSIONS TO OLD AND DISABLED COMMISSIONED OFFICERS -	5,025	5,025	—	—
K.— DITTO - AND GRATUITIES TO SEAMEN AND MARINES - - -	304,918	285,210	19,708	—
£.	550,447	528,667	21,918	138
NET INCREASE - - - £. 21,780.				
SECTION 2.—CIVIL PENSIONS.				
A.—PENSIONS, CIVIL, SALARIED OFFICERS - - - - -	91,485	92,575	—	1,140
B.— DITTO - - ARTIFICERS, &c. - - - - -	87,507	84,408	3,099	—
C.— DITTO - - COAST GUARD - - - - -	43,483	40,993	2,440	—
D.—CONTRIBUTION IN AID OF A PENSION FUND FOR THE METRO- POLITAN POLICE, &c. - - - - -	1,123	939	184	—
£.	223,498	218,915	5,723	1,140
NET INCREASE - - - £. 4,593.				

VOTE 16.—MILITARY AND CIVIL PENSIONS AND ALLOWANCES—*continued.*

III.

DETAILS of the foregoing.

(SECTION 1)—MILITARY PENSIONS AND ALLOWANCES.

				REQUIRED for the Service of the Year 1868/69.		LAST VOTE for the Financial Year 1867/68.	
				£.	s. d.	£.	s. d.
A.—PENSIONS FOR GOOD AND MERITORIOUS SERVICES.							
Granted in pursuance of an Order in Council, dated 12th July 1837, founded on the Recommendation contained in the Report of the Select Committee of the House of Commons on Army and Navy Appointments, dated 12th August 1833.							
				ESTIMATES on which the Services are stated.			
FLAG OFFICERS.							
Admiral Sir George R. Sartorius, K. C. B.	-	-	-	1863-64	p. 69	300	- -
Sir Fairfax Moresby, G. C. B.	-	-	-	1863-64	p. 69	300	- -
Sir Houston Stewart, G. C. B.	-	-	-	1864-65	p. 76	300	- -
Sir William Fanshawe Martin, Bart., K. C. B.	-	-	-	1864-65	p. 77	300	- -
Sir Provo William Parry Wallis, K. C. B.	-	-	-	1865-66	p. 86	300	- -
Sir Henry Ducie Chads, G. C. B.	-	-	-	1866-67	p. 109	300	- -
Sir W. J. Hope Johnstone, K. C. B.	-	-	-	1867-68	p. 111	300	- -
CAPTAINS.							
Captain Sir Robert John Le Mesurier McClure, Kt., C. B.	-	-	-	1864-65	p. 80	150	- -
Frederick Byng Montresor	-	-	-	1865-66	p. 87	150	- -
Edward Codd	-	-	-	1865-66	p. 88	150	- -
Charles Farrel Hillyar	-	-	-	1865-66	p. 88	150	- -
George Sumner Hand, C. B.	-	-	-	1865-66	p. 89	150	- -
Michael De Courcy, C. B.	-	-	-	1865-66	p. 89	150	- -
Thomas Hope	-	-	-	1866-67	p. 110	150	- -
The Right Honourable Lord Frederic Herbert Kerr	-	-	-	1866-67	p. 110	150	- -
Edmund Heathcote	-	-	-	1866-67	p. 110	150	- -
Edward Augustus Inglefield	-	-	-	1866-67	p. 111	150	- -
James Newburgh Strange	-	-	-	1866-67	p. 111	150	- -
William King Hall, C. B.	-	-	-	1867-68	p. 111	150	- -
Thomas Wilson	-	-	-	1867-68	p. 111	150	- -
James Francis Ballard Wainwright	-	-	-	1867-68	p. 112	150	- -
James Charles Prevost	-	-	-	1867-68	p. 112	150	- -
Sir William Saltonstall Wiseman, Bart., C. B.	-	-	-	1867-68	p. 112	150	- -
James Aylmer Paynter	-	-	-	1867-68	p. 113	150	- -
Arthur Cumming	-	-	-	1867-68	p. 113	150	- -
Edward Tatham	-	-	-	1867-68	p. 114	150	- -
Henry Charles Otter	-	-	-	1867-68	p. 114	150	- -
John B. Dickson	-	-	-	1867-68	p. 114	150	- -
MARINE OFFICERS.							
General John Rawlings Coryton	-	-	-	1859-60	p. 91	300	- -
Colonel George Gardiner Alexander, C. B.	-	-	-	1867-68	p. 115	150	- -
Hayes Marriott	-	-	-	1867-68	p. 115	150	- -
MEDICAL OFFICERS.							
Inspector General Sir William Rae, Kt., C. B., M. D.	-	-	-	1863-64	p. 74	100	- -
John Wilson, M. D.	-	-	-	1863-64	p. 74	100	- -
Alexander Nisbet, M. D.	-	-	-	1866-67	p. 112	100	- -
Carried forward				£.		4,200	- -
						6,150	- -

No. 16 (SECTION 1)—MILITARY PENSIONS AND ALLOWANCES—*continued.*

				REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
				£. s. d.	£. s. d.
A.—PENSIONS FOR GOOD AND MERITORIOUS SERVICES—<i>continued.</i>					
Brought forward - - -				4,200 - -	6,150 - -
Pensions Granted within the Year:					
FLAG OFFICER.					
Admiral Sir MICHAEL SEYMOUR, G.C.B. - - - - -				800 - -	—
Entered the Service - - - - -			5 November 1813		
Lieutenant - - - - -			12 September 1822		
Commander - - - - -			6 December 1824		
Captain - - - - -			5 August - 1826		
Rear-Admiral - - - - -			27 May - 1854		
Vice-Admiral - - - - -			1 November 1860		
Admiral - - - - -			5 March - 1864		
While serving in the "Hannibal" was present at the capture, in March 1814, of "La Sultane," French Frigate.					
Held the appointment of Commodore Superintendent of Devonport Dockyard, from September 1851 to August 1854. Was Captain of the Fleet in the Baltic, from February to December 1854.					
As a Rear-Admiral, served in the Baltic under Rear Admiral Dundas, from March 1855 to December 1855. Was mentioned with high praise for spirited and judicious proceedings in the Bay of Narva, and was engaged in the attack on Sweaborg.					
Served as Commander-in-Chief in the East Indies and China, from February 1856 to May 1859. In 1857 was engaged in the attack on Canton and its defences, and in an action with a flotilla of war junks. In 1858 commanded the naval forces at the capture of Canton, and received especial praise for his services. Was employed on service at the entrance of the Peiho River, resulting in the treaty of Peking, and received the thanks of the Emperor of the French for his successes.					
Served as Commander-in-Chief at Portsmouth, from March 1863 to March 1866.					
Has been actively employed as a Commissioned Officer about twenty-eight years.					
CAPTAINS.					
Captain RICHARD ASHMORE POWELL, C.B. - - - - -				150 - -	—
Entered the Service - - - - -			5 February 1830		
Lieutenant - - - - -			18 May - 1842		
Commander - - - - -			4 November 1851		
Captain - - - - -			8 March - 1855		
When in command of the "Janus" in 1851, was engaged in a gallant action with Moorish Pirates.					
Whilst in command of the "Vesuvius," in 1854, was employed at the destruction of the batteries at the Sulina mouth of the Danube, and of the town of Sulina.					
Was employed on Transport Service in the Bosphorus during the Crimean War, and was highly commended for his zeal and ability in conducting his duties.					
Has been actively employed as a Commissioned Officer, including his service as Mate, more than twenty-eight years.					
Captain GEORGE GRANVILLE RANDOLPH - - - - -				150 - -	—
Entered the Service - - - - -			7 December 1830		
Lieutenant - - - - -			27 June - 1838		
Commander - - - - -			9 November 1846		
Captain - - - - -			18 November 1854		
Served in the "Castor" and "North Star" during the operations on the coast of Spain under Commodore Lord John Hay, from 1834 to 1840.					
In 1845, when Lieutenant of the "Dædalus," was engaged in an action against a rebel Borneo chieftain.					
Performed valuable services on shore in the Crimea, in 1854-1855.					
Has served as Commodore in charge of the Naval and Victualling Yard at the Cape of Good Hope, since September 1867.					
Has been actively employed as a Commissioned Officer, including his service as Mate, about twenty six years.					
Carried forward - - - £.				4,800 - -	6,150 - -

No. 16 (SECTION 1)—MILITARY PENSIONS AND ALLOWANCES—*continued.*

						REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
						£. s. d.	£. s. d.
A.—PENSIONS FOR GOOD AND MERITORIOUS SERVICES— <i>continued.</i>							
Brought forward - - -						4,800 - -	6,150 - -
Pensions Granted within the Year— <i>continued.</i>							
CAPTAINS— <i>continued.</i>							
Captain THOMAS ABEL BREMAGE SPRATT, C.B.	-	-	-	-	-	150 - -	—
Entered the Service	-	-	-	22 June	1827		
Lieutenant	-	-	-	15 October	1841		
Commander	-	-	-	5 March	1849		
Captain	-	-	-	3 January	1855		
In April 1855 was thanked for his services in laying down the submarine telegraph to the Crimea. In 1855 performed valuable service at the fall of Kimbourn, when in command of the "Medina," and in surveying the mouths of the Danube. Captain Spratt was many years engaged in the surveying service, and has been actively employed as a Commissioned Officer, including his service as Mate, more than twenty-five years.							
Captain GEORGE WODEHOUSE	-	-	-	-	-	150 - -	—
Entered the Service	-	-	-	6 March	1823		
Lieutenant	-	-	-	8 June	1833		
Commander	-	-	-	30 July	1844		
Captain	-	-	-	19 October	1854		
Served as Midshipman in the "Asia" at the battle of Navarino in October 1827. In September 1854 was commended for his great exertions and vigilance at the blockade of Helsingfors, whilst in command of the "Rosamond." Has been actively employed as a Commissioned Officer, including his service as Mate, over twenty-one years.							
Captain CHARLES JOSEPH FREDERICK EWART	-	-	-	-	-	150 - -	—
Entered the Service	-	-	-	5 February	1830		
Lieutenant	-	-	-	23 November	1841		
Commander	-	-	-	12 August	1848		
Captain	-	-	-	1 February	1855		
Commanded the "Cambridge" gunnery ship at Devonport, from April 1863 to May 1867. Has been actively employed as a Commissioned Officer, including his service as Mate, about twenty-six years.							
Carried forward - - - £.						5,250 - -	6,150 - -

No. 16 (SECTION 1)—MILITARY PENSIONS AND ALLOWANCES—*continued.*

						REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
						£. s. d.	£. s. d.
A.—PENSIONS FOR GOOD AND MERITORIOUS SERVICES— <i>continued.</i>							
Brought forward - - -						5,250 - -	6,150 - -
Pensions Granted within the Year— <i>continued.</i>							
CAPTAINS— <i>continued.</i>							
Captain JOHN BORLASE, C.B.	-	-	-	-	-	150 - -	-
Entered the Service	-	-	-	-	7 November 1826		
Lieutenant	-	-	-	-	11 June - 1841		
Commander	-	-	-	-	13 June - 1849		
Captain	-	-	-	-	7 April - 1855		
Was employed in the Turkish Service from 1851 to 1853.							
Performed valuable and gallant services on shore at the siege of Sebastopol in 1854.							
In 1862, while Captain of the "Pearl," was engaged in the operations under Vice Admiral Sir James Hope, against the Chinese rebels, and commanded the naval forces at the re-capture of Kahding.							
Was mentioned with high praise for his valuable assistance at the action of Kagosima, in August 1863, under Vice Admiral Kuper.							
Has been actively employed as a Commissioned Officer, including his service as Mate, more than twenty-six years.							
Captain GEORGE WILLIAM FREEDY, C.B.	-	-	-	-	-	150 - -	-
Entered the Service	-	-	-	-	12 November 1828		
Lieutenant	-	-	-	-	10 June - 1844		
Commander	-	-	-	-	10 February 1853		
Captain	-	-	-	-	29 September 1855		
Whilst Midshipman of the "Pallas," was employed in operations for the suppression of the slave trade.							
Served as Commander of the "Duke of Wellington," in the Baltic in 1854-1855; had charge of a division of gun boats at Sweaborg, and performed valuable service at Bomersund.							
In 1858 was employed in the laying down of the Atlantic Telegraph Cable.							
Has been actively employed as a Commissioned Officer, including his service as Mate, more than twenty-six years.							
Carried forward - - - £.						5,550 - -	6,150 - -

No. 16 (SECTION 1)—MILITARY PENSIONS AND ALLOWANCES—*continued.*

		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
A.—PENSIONS FOR GOOD AND MERITORIOUS SERVICES— <i>continued.</i>			
Brought forward - - -		5,550 - -	6,150 - -
Pensions Granted within the Year— <i>continued.</i>			
MARINE OFFICERS.			
General HENRY IVATT DELACOMBE - - - - -		300 - -	—
2nd Lieutenant - - - - 21 October - 1805			
1st Lieutenant - - - - 30 June - 1810			
Captain - - - - 12 October - 1832			
Brevet Major - - - - 9 November 1846			
Lieutenant-Colonel - - - 25 May - 1849			
Colonel 2nd Commandant - - 9 June - 1854			
Colonel Commandant - - - 22 June - 1855			
Major-General - - - - 14 July - 1855			
Lieutenant General - - - 22 December 1860			
General - - - - 23 August - 1866			
Served in H.M.S. "Tonnant," 1806 to 1810, chiefly on the coasts of France and Spain, covering the retreat and embarkation of Sir John Moore's army at Corunna. Basque Roads; siege and defence of Cadiz. Engaged in several boat affairs, cutting out and destroying vessels. H.M.S. "Imperieuse," 1811 to 1814. Attack and destruction of the batteries of Langueia and Alassis, after having charged with the bayonet and defeated a battalion of the French 52nd Regiment, of very superior force. Attack on the batteries and tower of Port D'Anzo; drove the enemy from the forts and works, which were afterwards blown up; a convoy of 29 vessels brought out. Attack on Via Reggio and Leghorn. Also employed on various and repeated boat services. Partially engaged with the French fleet off Toulon, and several times with the Neapolitan squadrons, gunboats, and batteries in the Bay of Naples.			
Colonel Commandant WILLIAM STRATTON ASLETT - - - - -		150 - -	—
2nd Lieutenant - - - - 26 July - 1837			
1st Lieutenant - - - - 5 March - 1841			
Adjutant - - - - 22 May - 1848			
Captain - - - - 3 October - 1849			
Brevet Major - - - - 12 December 1854			
Brevet Lieutenant Colonel - - 17 June - 1861			
Lieutenant-Colonel - - - 1 March - 1862			
Colonel 2nd Commandant - - - 18 December 1865			
Colonel Commandant - - - 18 February 1867			
Served as Brigade Major to the Royal Marines in the Crimea in 1854 and part of 1855, including the battle of Balaclava; was present at the whole of the siege and fall of Sebastopol; also at the surrender of Kinbourn.			
Colonel Commandant WILLIAM GRIGOR SUTHER, C.B. - - - - -		150 - -	—
2nd Lieutenant - - - - 3 August - 1837			
1st Lieutenant - - - - 11 May - 1841			
Captain - - - - 16 August - 1850			
Lieutenant-Colonel - - - 6 March - 1862			
Brevet Colonel - - - - 8 December 1865			
Colonel 2nd Commandant - - - 10 November 1866			
Colonel Commandant - - - 29 November 1867			
Served on North Coast of Spain during the Carlist War. Coast of Syria, 1840-41. With the Battalion in Ireland, 1843 to 1845. Commanded Battalion in Japan, 1864 and 1865. Present at the attack and bombardment of the Forts of Simonosaki by the combined Fleets. Landed in command of the allied brigades for the destruction of the Forts and Magazines, 6 September 1864. Commanded Brigade at the storming and capture of the enemy's stockade.			
		6,150 - -	6,150 - -

No. 16 (SECTION 1)—MILITARY PENSIONS AND ALLOWANCES—*continued.*

B.—PENSIONS FOR CONSPICUOUS BRAVERY:

The Pensions to Warrant and Petty Officers, Seamen, and Marines, who have received the Decoration of the "Victoria Cross" for the "Merit of Conspicuous Bravery," for the year 1867-68, amounted to - - - -

Number on Pension, 19.

The names of the Pensioners were given on the Navy Estimates for the years
 1858-59 - - - - p. 99 | 1864-65 - - - - p. 82
 1862-63 - - - - 84 | 1865-66 - - - - 90
 1863-64 - - - - 75 | 1866-67 - - - - 113

C.—FLAG OFFICERS' RETIRED SERVICE PENSIONS:

Flag Officers on Reserved Half-pay in receipt of Retired Service Pensions, granted in pursuance of Her Majesty's Order in Council, 25 June 1851, viz.:

Admiral Sir Henry Prescott, K.C.B.	-	-	-	-	-	-	-	150	-	-	150	-	-
" Francis Erskine Loch	-	-	-	-	-	-	-	150	-	-	150	-	-
" Sir Edward Collier, K.C.B.	-	-	-	-	-	-	-	150	-	-	150	-	-
" William Walpole	-	-	-	-	-	-	-	150	-	-	150	-	-
" Sir George Robert Lambert, G.C.B.	-	-	-	-	-	-	-	150	-	-	150	-	-
" Thomas Bennett	-	-	-	-	-	-	-	150	-	-	150	-	-
" Henry Smith, C.B.	-	-	-	-	-	-	-	150	-	-	150	-	-
Vice Admiral Michael Quin	-	-	-	-	-	-	-	150	-	-	150	-	-
" John Jervis Tucker	-	-	-	-	-	-	-	150	-	-	150	-	-
" Frederick Bullock	-	-	-	-	-	-	-	150	-	-	150	-	-
£.								1,500	-	-	1,500	-	-

D.—PENSIONS TO COMMISSIONED AND WARRANT OFFICERS:

For Pensions to Commissioned and Warrant Officers, &c., as voted in the Estimates for 1867-68, amounted to - - - -

Abate,—Amount of Pensions ceased between 1st December 1866 and 30th November 1867 - - - -

Add,—Pensions granted between 1st December 1866 and 30th November 1867; viz.:

Staff-Commander H. Brehant, for injuries received in execution of his duty on board H.M.S. "Barrosa" - - - -

Mr. W. Richardson, surgeon, for injuries received on board H.M.S. "Octavia," in 1865 - - - -

Lieutenant H. Boys, for injuries received on board H.M.S. "Barrosa," in 1863 - - - -

Captain William Fitzherbert Ruxton, loss of use of left leg (for two years)

To Five Gunners, Thirteen Boatswains, Eight Carpenters, Ten Engineers, and Three Second Class Chief Officers of the Coast Guard; also, One Master's Assistant, One Clerk, One Naval Cadet, and One Master of a Dockyard Yacht, varying from 24*l.* to 100*l.* - - - -

£.	38,811	-	-	38,811	-	-
	1,454	-	-			
£.	37,357	-	-			
	100	-	-			
	91	5	-			
	45	12	6			
	150	-	-			
	2,851	2	6			
£.	40,595	-	-	38,811	-	-

Number of Pensioners of each Class paid out of the above sum:

Commissioned Officers.	Flag Officer	-	1	Royal Marines.	Lieutenant-Colonel	-	1
	Captains	-	15		Captains	-	5
	Commanders	-	21		Lieutenants	-	9
	Lieutenants	-	47	Warrant Officers.	Gunners	-	121
	Staff Commanders	-	2		Boatswains	-	116
	Masters	-	9		Carpenters	-	126
	Second Masters	-	4		Engineers	-	51
	Sub-Lieut. and Mates	-	2		Naval Cadets	-	2
	Chaplain	-	1		Clerk	-	1
	Surgeons	-	2		Master of a Dock Yard	-	1
	Paymasters	-	2		Yacht	-	-
				Coast Guard.	2nd Class Chief Officers	-	3
					Cooks	-	44
TOTAL							586

No. 16. (SECTION 1)—MILITARY PENSIONS AND ALLOWANCES—continued.

		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
		£. s. d.	£. s. d.
E.—PENSIONS TO WIDOWS AND RELATIVES OF OFFICERS SLAIN, &c. :			
The Pensions to the Widows and Relatives of Officers Slain, drowned, &c., as voted in the Estimates for 1867-68, amounted to - - - - -		10,718 - -	10,718 - -
Abate,—Amount of Pensions ceased between 1st December 1866 and 30th November 1867 - - - - -		135 - -	
		£. 10,583 - -	
Add,—Pensions granted between the 1st December 1866 and 30th November 1867, viz. :—			
Widow of Mr. John Gregory, acting 1st Class Assistant Engineer - -		50 - -	
Widow of the Rev. R. K. Edwards, Chaplain - - - - -		65 - -	
Widow of Mr. J. W. Torbett, Assistant Paymaster - - - - -		50 - -	
Widow of Mr. J. Winwood, 1st Class Gunner - - - - -		30 - -	
Widow of Mr. W. Duirs, M. D., Deputy Inspector General - - - - -		140 - -	
Widow of Mr. R. Dillon, Engineer - - - - -		50 - -	
Widow of Mr. W. Pratt, Assistant Engineer - - - - -		50 - -	
Widow of the Rev. W. B. Mc Cean, Chaplain - - - - -		65 - -	
Widow of Mr. Henry Hubbard, Gunner - - - - -		30 - -	
		£. 11,113 - -	10,718 - -
Number of Pensioners of each Class paid out of the above sum :			
To Widows, &c. of	Flag Officers - 4	Captains, R. M. - 4	
	Captains - 15	Inspectors of steam machinery - 2	
	Commanders - 9	Engineers (including Assistant Engineers) - 22	
	Lieutenants - 19	Warrant Officers - 75	
	Staff Commander 1	Master of Transport - 1	
	Masters - 13	Ice Masters - 2	
	Acting Masters - 2	Pilots and others - 14	
	Second Masters - 3		
	Chaplains - 3		
	Medical Officers 12		
	Paymasters - 7	TOTAL - - - 209	
	Lieut.-Colonel, R.M. 1		
F.—PENSIONS TO WIDOWS OF NAVAL OFFICERS :			
For Pensions to Widows of Flag Officers, Captains, Commanders, Staff Commanders, Secretaries, Lieutenants, Masters, Second Masters, Chaplains, Naval Instructors, Engineers, and Warrant Officers - - - - -		129,421 - -	128,780 - -
For Pensions to Widows of Medical Officers and Paymasters - - - - -		24,639 - -	25,249 - -
		£. 154,060 - -	154,029 - -
Total Number of Pensioners of each Class paid out of the above sum :			
To Widows of	Flag Officers - 134	Engineers and Assistant Engineers - 40	
	Captains - 247	Warrant Officers - 657	
	Commanders - 482	Second Class Chief Officers of the Coast-guard - 3	
	Staff Commanders 19	Medical Officers - 304	
	Secretaries - 5	Paymasters - 248	
	Lieutenants - 627		
	Masters - 198	TOTAL - - - 2,982	
	Second Masters - 1		
	Chaplains - 10		
	Naval Instructors 7.		

No. 16 (SECTION No. 2.)—CIVIL PENSIONS AND ALLOWANCES.

A.—PENSIONS, CIVIL; SALARIED OFFICERS.

B.—PENSIONS, CIVIL; ARTIFICERS, &c.

For Superannuations and Pensions granted to Persons formerly employed in the Civil Establishments of the Navy, as shown in the Estimates for 1867-68, amounting to - - - - -

Abate,—Amount of Pensions ceased between 1st December 1866 and the 30th November 1867 - - - - -

£.

Add,—Pensions granted between 1st December 1866 and 30th November 1867.

ON SUPERANNUATION:

ADMIRALTY:

	SERVICE.		PENSIONS.	
	Years.	Total.		
	<i>Yrs. Mths.</i>	<i>Yrs. Mths.</i>	£.	s. d.
N. L. Seppings, 1st Class Clerk - - - - -	- -	41 7	498	6 8
H. B. Parke, 2nd Class Clerk - - - - -	- -	18 9	121	10 -
J. Anderson, 2nd Class Clerk - - - - -	- -	26 3	242	16 -
L. C. Irving, 3rd Class Clerk - - - - -	- -	11 11	47	13 4
John Giles, 1st Class Messenger - - - - -	- -	21 1	55	6 -
Thomas Payne, 1st Class Messenger - - - - -	- -	37 4	72	18 5

DOCKYARDS:

DEPTFORD:

J. Tudhope, Senior Clerk - - - - -	- -	29 3	217	10 -
Thomas H. Robins, Clerk - - - - -	- -	13 7	65	- -

CHATHAM:

Rev. A. Fielding, Chaplain - - - - -	Pension increased by -	42	19	2
	For original Pension, <i>see</i> Estimates 1867-68, p. 119.			

Thomas George, Master Smith	{ On Day Pay	20 3	34	1	141	13	4
	{ On Salary -	13 10					

SHEERNESS:

George Blaxland, Engineer	- - - - -	- - - - -	20	4	191	- -
Henry Flemen, Supernumerary Inspector of Shipwrights (late Measurer)	- - - - -	{ On Day Pay	20	7	29	6
		{ On Salary	8	11		
			29	6	72	10

PORTSMOUTH:

W. H. Brain, Assistant Master Shipwright - - - - -	{ On Day Pay	7 5	34	2	253	-	-
	{ On Salary -	26 9					
Henry Taplin, Foreman of Joiners	{ On Day Pay	15 9	39	3	117	-	-
	{ On Salary. -	23 6					

Carried forward - - - £. 2,139 2 11

REQUIRED
for the
Service of the Year
1868-69.

LAST VOTE
for
the Financial Year
1867-68.

£. s. d.
176,983 - -

£. s. d.
176,983 - -

8,887 18 6

168,095 1 6

168,095 1 6

176,983 - -

No. 16 (SECTION No. 2).—CIVIL PENSIONS AND ALLOWANCES—*continued.*

A.—PENSIONS, CIVIL; SALARIED OFFICERS } <i>continued.</i> B.—PENSIONS, CIVIL; ARTIFICERS, &c. }				REQUIRED for the Service of the Year 1868-69.	LAST VOTE for the Financial Year 1867-68.
Pensions granted between 1st December 1866 and 30th November 1867— <i>continued.</i>					
ON SUPERANNUATION— <i>continued.</i>					
		SERVICE.		PENSIONS.	
		Years.	Total.		
		<i>Yrs. Mths.</i>	<i>Yrs. Mths.</i>	<i>£. s. d.</i>	<i>£. s. d.</i>
DOCKYARDS, &c.— <i>continued.</i>					
Brought forward - - - -		- -	- -	2,139 2 11	169,095 1 6
DEVONPORT:					
J. Reid, Assistant Surgeon - - - -		- -	23 1	98 - -	
Adam Ainslie, Master Smith - - - -		- -	15 5	62 10 -	
ANTIGUA:					
W. H. Brown, Clerk in Charge - - - -		- -	16 1	118 17 10	
ROYAL CLARENCE VICTUALLING YARD:					
William Dunning, Foreman of Works - - - -		{ On Day Pay 31 4 On Salary - 8 2			
			39 6	117 - -	
ROYAL MARINE BARRACKS, FORTON:					
Lucy Deverall, Schoolmistress - - - -		- -	- -	18 5 -	
				£. 2,553 15 9	
294 Artificers, &c., at Pensions varying from 61. 2s. 11d. } to 62l. - - - - - }		- -	- -	7,709 16 1	
					10,263 11 10
ON REDUCTION OF OFFICE.					
ADMIRALTY:					
J. H. Jesse, 1st Class Clerk - - - -		- -	37 5	583 6 8	
					583 6 8
TOTAL - - -				£.	178,942 - -
					176,983 - -

A B S T R A C T.

	Number of Pensioners.	1868-69.	1867-68.
		<i>£. s. d.</i>	<i>£. s. d.</i>
A.—PENSIONS, CIVIL; SALARIED OFFICERS -	463	91,435 - -	92,575 - -
B.—PENSIONS, CIVIL; ARTIFICERS, &c. -	3,075	87,507 - -	84,408 - -
TOTAL - - -	3,538	178,942 - -	176,983 - -

No. 16 (SECTION No. 2).—CIVIL PENSIONS AND ALLOWANCES—*continued.*

C.—PENSIONS, COAST GUARD:

For Pensions granted to Persons formerly employed in the Coast Guard Service, and Compassionate Allowances to the Widows and Children of Men who have met their Deaths on Duty, as shown in the Estimates for 1867-68 -

Abate,—Amount of Pensions ceased between 1st December 1866 and 30th November 1867 - - - - -

£.

Add,—Pensions and Allowances granted between the 1st December 1866 and 30th November 1867 :—

For Pensions to 98 Officers and Men lately belonging to the Coast Guard Service on Shore - - - - -

£.

REQUIRED
for the
Service of the Year
1868-69.

LAST VOTE
for
the Financial Year
1867-68.

£. s. d.

£. s. d.

40,993 - -

40,993 - -

1,736 4 11

39,256 15 1

4,176 4 11

43,433 - -

40,993 - -

Number of Pensioners of each Class paid out of the above Sum :

Clerks, Coast Guard Office - - 3
Lieutenants - - - - 25
Chief Officers - - - - 75
Chief Quartermasters in Command - 3
Masters and Second Masters - - 11
Chief Boatmen in Charge - - - 94
Chief Boatmen - - - - - 122
Commissioned Boatmen - - - 334
Boatmen - - - - - 302
Able Seamen (Tenders) - - - 6
Extra Men - - - - - 20

Acting Boatswains - - - - 1
Mariners - - - - - 27
Mounted Guard - - - - 8
Gunners - - - - - 6
Second Mate in Command - - 2
Acting Chief Boatswain's Mates - 2
Acting Chief Carpenter's Mates - 5
Divisional Carpenters - - - 2
Steward - - - - - 1
Widows - - - - - 68
Children - - - - - 146

TOTAL - - - 1,272

D.—CONTRIBUTION IN AID OF A PENSION FUND FOR THE METROPOLITAN POLICE, &c.:

Estimated Amount required for Contribution in Aid of the Fund for the Pensions of Metropolitan Police employed in the several Establishments at Home - - - - -

1,123 - -

939 - -

Vote 17.

EXTRA ESTIMATE FOR SERVICES NOT NAVAL.—FREIGHT, &c. ON ACCOUNT OF THE ARMY DEPARTMENT.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the Expense of Services not NAVAL; viz. FREIGHT, &c., on account of the ARMY DEPARTMENT.

Three Hundred and Fifty Thousand and Six Hundred Pounds.

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
A. { WAGES AND ALLOWANCES - - - HER MAJESTY'S TROOP SHIPS {	Provided for under Vote No. 1	57,840	-	55,040
{ SPECIAL ALLOWANCES TO OFFICERS AND MEN, DITTO - - -	2,800			
B.—VICTUALS, &c. - - - - - DITTO - - -	27,900	22,150	5,750	—
C.—COALS, CABIN FURNITURE, AND OTHER STORES, DITTO - - -	80,000	75,000	5,000	—
D.—MEDICINES - - - - - DITTO - - -	400	336	64	—
E.—PILOTAGE AND OTHER MISCELLANEOUS EXPENSES, DITTO - - -	2,000	1,400	600	—
F.—FREIGHT, &c., OF SHIPS ON MONTHLY PAY - - - - -	—	—	—	—
G.—CONVEYANCE OF TROOPS, ABROAD AND HOMEWARD - - - - -	14,200	83,950	-	69,750
H.—COALS FOR STEAM TRANSPORTS AND FREIGHT SHIPS - - -	—	—	—	—
I.—FREIGHT OF ARMY AND ORDNANCE STORES, ABROAD AND HOMEWARD - - - - -	42,000	45,000	-	3,000
K.—INTERCOLONIAL CONVEYANCE OF TROOPS AND MESS - - - - -	20,000	24,000	-	4,000
L.—INTERCOLONIAL FREIGHT OF ARMY AND ORDNANCE STORES - - -	4,000	6,000	-	2,000
M.—MESS ALLOWANCES TO ARMY OFFICERS, &c., ABROAD AND HOMEWARD - - - - -	37,800	12,650	25,150	—
N.—FREIGHT OF SHIPS ON SHORT SERVICES - - - - -	7,800	11,350	-	3,550
O.—PASSAGE MONEY, ARMY - - - - -	43,000	38,000	5,000	—
P.—FITTING TRANSPORTS AND FREIGHT SHIPS - - - - -	200	1,100	-	900
Q.—BEDDING AND OTHER STORES FOR TROOPS - - - - -	6,800	5,100	1,700	—
R.—FORAGE AND STORES FOR HORSES - - - - -	400	400	—	—
S.—PAY AND CONTINGENT EXPENSES OF TRANSPORT OFFICERS AFLOAT, &c. - - - - -	700	1,500	-	800
T.—PROVISIONS, &c., FOR TROOPS - - - - -	60,600	36,900	23,700	—
	£. 350,600	422,676	66,964	139,040
Abate—Contribution payable by India Government, on account of conveyance of one Regiment to India, via Ceylon - - - - -	-	16,700	-	16,700
	£. 350,600*	405,976	66,964	122,340

NET DECREASE - - - £. 55,376

* In addition to the amount provided in the foregoing Vote for Freight, &c. on account of the Army Department, amounting to - £. 350,600
The following sum is likewise included in the undermentioned Vote of the Navy Estimates for expenses on account of that service, viz.:—

For Sea Pay to Officers and Crews borne on the books of Her Majesty's Troop Ships and Indian Troop Ships on the European side of the Isthmus of Suez (Vote No. 1) - - - - - £. 74,191

Total Charge for Freight, &c. on account of the Army Department - - - £. 424,791

VOTE 17.—Extra Estimate for Services not Naval.—FREIGHT, &c., on Account of the ARMY DEPARTMENT—continued.

III. DETAILS of the foregoing.

	REQUIRED for the Service of the Year 1868-69.	LAST VOTE for the Financial Year 1867-68.	Statement of Estimated Credits in 1868-69, showing the Manner in which they would hitherto have been appropriated.		
			Amount.	Description.	How received.
For Expense of Her Majesty's Troop Ships—	£.	£.	£.		
Sea Pay of Officers and Men - - - - -	Provided under Vote, No. 1.	57,840	—		
A. { Special Allowances to Officers and Men (in addition to their Pay, and Allowances pro- vided under Vote No. 1 - - - - -	2,800	Provided in Sea Pay &c.	610		
B.—Victuals, &c., for ditto - - - - -	27,900	22,150	5,880	For India Overland Troop Service.	Recovered from India Go- vernment, and credited to Vote.
C.—Coals, Cabin Furniture, and other Stores - -	80,000	75,000	48,950		
D.—Medicines for Officers and Men - - - - -	400	336	—		
E.—Pilotage, Passage Money, Travelling Expenses, and Lodging Allowances of Crews, and other Miscellaneous Expenses - - - - -	2,000	1,400	—		
TOTAL, exclusive of Sea Pay - - -	113,100	156,726	25,440		
F.—For Freight of Ships on Monthly Pay, or for Purchase of the same - - - - -	—	—	—		
G.—For Freight of Ships engaged for the Conveyance of Troops to and from Great Britain and the Colonies, and of Military Pensioners from Great Britain - - - - -	14,200	83,950	—		
H.—For Coals for Steam Transports - - - - -	—	—	—		
I.—For Freight of Ships for the Conveyance of Military Stores to and from Great Britain and the Colonies - - - - -	42,000	45,000	—		
K.—For Freight of Ships for the Conveyance of Troops from one Colony to another, and their Rations; and for the Mess and Passage of Officers and Men from one Foreign Station to another, and from one Port to another in the same command - - - - -	20,000	24,000	—		
L.—For Freight of Ships for the Conveyance of Stores from one Colony to another, and from one Foreign Station to another, and from one Port to another in the same command - -	4,000	6,000	4,020	Contributions of Military Officers.	Repaid by War Office, and credited to Vote.
M.—For Mess of Military Officers and Civilians of the Army Department while on Passage to and from Foreign Stations in Her Majesty's Ships of War, Transports, and Freight Ships -	37,800	12,650	3,930		
			8,500	Contributions of Naval Officers of Her Majesty's Troop Ships - - -	Received on board Her Majesty's Troop Ships, and credited to Vote.
			9,020	Repayments for Messing Officers' Families, and for Extras supplied. For India Overland Troop Service.	
N.—For Freight of Ships for the Conveyance of Troops coastwise, and between Great Britain and Ireland, when over 50 men - - - - -	7,800	11,350	—		Recovered from India Go- vernment, and credited to Vote.
O.—For Passage Money on account of Military Officers and Civilians of the Army Depart- ment going upon and returning from Services Abroad - - - - -	43,000	38,000	3,000	Repayments of Passage Money by Military Officers.	Repaid by War Office, and credited to Vote.
P.—For fitting Monthly Transports and Freight Ships - - - - -	200	1,100	—		
Q.—For Bedding, Blankets, and other Stores, for Troops - - - - -	6,800	5,100	—		
R.—For Forage and Stores for Horses - - - - -	400	400	—		
S.—For the Pay and Contingent Expenses for Officers of the Navy employed as Transport Officers afloat, or as Temporary Transport Officers at the Outposts - - - - -	700	1,500	—		
T.—For Provisions and Medical Comforts for Troops embarked on board Ships of War, Troop Ships, Monthly Transports, and Freight Ships - -	60,600	36,900	10,600	Ration Stoppages - -	Repaid by War Office, and credited to Vote.
			26,650	For India Overland Troop Service.	
			50	Convict Service - -	Recovered from India Go- vernment, and credited to Vote.
£.	350,600	422,676	91,210		Repaid by Convict Vote.
Abate Contributions payable by India Govern- ment on account of Conveyance of One Regi- ment to India, via Ceylon - - - - -	—	16,700			
TOTAL - - - - - £.	350,600	405,976			

Not any abatement has been made for the cost of supplies for other Departments of Government, Mess and Ration Stoppages, and Passage Money for Officers' Families, the credits for which are estimated at 91,210l.

RECAPITULATION OF THE FOREGOING ESTIMATES.

Nos. of Votes.	Pages.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
			£. s. d.	£. s. d.
1 to 14	6 to 116	} NAVAL SERVICE - {	EFFECTIVE - 9,352,579 - -	*9,117,758 - -
15 and 16	117 to 133		NON-EFFECTIVE 1,474,111 - -	1,452,519 - -
		TOTAL for the NAVAL SERVICE, as per } Abstract - - - - }	10,826,690 - -	*10,570,277 - -
		For the Service of other Departments:		
17	{ 134 and 135 }	ARMY DEPARTMENT (Conveyance of Troops)	350,600 - -	405,976 - -
		GRAND TOTAL - - - £.	11,177,290 - -	*10,976,253 - -

* This sum includes the Vote in the Supplementary Estimate for the additional charge on account of the increased pay to be given to the Non-Commissioned Officers and Privates of the Royal Marine Corps, amounting to 50,000*l.* (see Parliamentary Paper, 22 July 1867, No. 465).

The whole Charge amounts to the Sum of Eleven Million One Hundred and Seventy-seven Thousand Two Hundred and Ninety Pounds.

Admiralty, }
13 February 1868. }

H. C O R R Y.

C. D U C A N E.

A P P E N D I X.

(For Description,—*see* Table of Contents, p. 2.)

No. 1.

to VOTE No. 1.—“ WAGES, &c., to SEAMEN,” page 6.

their Retinues ; of OFFICERS superintending HER MAJESTY’S DOCKYARDS, &c., and their Retinues ; and of COMMISSIONED the several Heads of Service specified ; the whole being calculated on the basis of the Pay and Allowances of the FLAG GUARD STATIONS ON SHORE (except “ CIVILIANS,” provided for under Vote No. 4), on the 1ST DECEMBER 1867.

Commanders in Chief, &c., on Home Stations.			Commanders in Chief, &c., on Foreign Stations.			Superintendents of Dockyards.			Total Number of each Rank.	Total Amount of each Rank.		TOTAL CHARGE.	R A N K.
Total per Annum.			Total per Annum.			Total per Annum.				Pay.	Allowances.		
No.	Pay.	Allowances.	No.	Pay.	Allowances.	No.	Pay.	Allowances.					
	£.	£.		£.	£.		£.	£.		£.	£.	£.	
2	3,650	2,190	-	-	-	-	-	-	2	3,650	2,190	5,840	Admirals.
1	1,460	1,095	-	-	-	-	-	-	4	5,840	6,023	11,863	Vice Admirals.
-	-	-	3	4,380	4,928	-	-	-					
2	2,190	2,190	-	-	-	-	-	-	7	7,665	7,300	14,965	Rear Admirals.
-	-	-	2	2,190	3,285	-	-	-					
-	-	-	-	-	-	2	2,190	1,095					
-	-	-	-	-	-	1	1,095	730	1	1,095	1,642	2,737	Commodore, 1st Class.
-	-	-	1	1,095	1,642	-	-	-					
-	-	-	1*	-	730	-	-	-	4	-	2,372	2,372	Commodores, 2nd Class.
-	-	-	3*	-	1,642	-	-	-					
-	-	-	-	-	-	1	601	91	3	1,802	1,643	3,445	
-	-	-	-	-	730	1	601	137					
-	-	-	-	-	548	1	600	137					
-	-	-	-	-	-	3	1,802	274	5	3,004	520	3,524	Captains.
-	-	-	-	-	-	1	601	155					
-	-	-	-	-	-	1	601	91	15	2,737	-	2,737	Flag Lieutenants.
5	912	-	7	1,277	-	3	548	-					
4	1,606	-	5	2,008	-	-	-	-	19	5,986	-	5,986	Secretaries to Flag Officers, &c.
1	301	-	2	602	-	-	-	-					
1	210	-	6	1,259	-	-	-	-					
77	3,926	-	76	3,732	-	44	1,380	-	197	9,038	-	9,038	Clerks and Retinues.
93	14,255	5,475	106	16,543	13,505	58	10,019	2,710					
No. 199 - - £. 49,778						No. 58 - £. 12,729			257				
4*						{ Deduct Commodores included among Captains } on next page - - - - -			4				
195						TOTALS carried to page 147 - - -			253	40,817	21,690	62,507	{ TOTALS carried to page 147.

RANK.	PAY OF EACH RANK.			ALLOWANCES OF EACH RANK.			EFFECTIVE, FOR GENERAL SERVICE.			GUNNERY, and TRAINING SHIPS.			STATIONARY, RECEIVING, and DEPÔT SHIPS (including Yachts).			SURVEYING VESSELS.		
	—	Daily.	Annual.	Nature.	Daily.	Annual.	No. of each Rank.	Total per Annum.		Number of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.	
								Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.
COMMISSIONED OFFICERS, &c.:			£. s. d.		£. s. d.	£. s. d.		£.	£.		£.	£.		£.	£.		£.	£.
Commodore of the 1st Class and Controller General of the Coast Guard (borne in H.M. Ship "Pembroke") -	- - - -	3 - -	1,095 - -	{ Allowance, to make his total pay 1,264l. 12s. 6d. per annum, the amount allowed for this office prior to the transfer of the Coast Guard to the Admiralty - - }	- - -	169 12 6	-	- - -	-	- - -	- - -	-	-	- - -	-	-	- - -	-
Captain and Deputy Controller General of the Coast Guard (borne in H. M. Ship "Pembroke") - - -	- - - -	1 12 11	600 14 7	{ Allowance, to make his total pay 700 l. per annum, inclusive of all emoluments - }	- - -	99 5 5	-	- - -	-	- - -	- - -	-	-	- - -	-	-	- - -	-
Captains - - -	In Command { 1st Class -	1 12 11	600 14 7	{ Command Money * - - }	{ At various Rates, according to the complement of the Ship, and whether employed on Sea or Harbour Service, from 91 l. 5 s. to 328 l. 10 s. per annum - - }		60	30,028	11,651	3	1,401	466	13	7,308	2,154	2	800	228
	2d Class -	1 7 5	500 7 1															
	3d Class -	1 1 11	399 19 7															
Captains - - -	Employed on Surveying or Special Service, but not in command of a Ship	As above -	As above -	Allowance - - - -	- 5 -	91 5 -	-	- - -	-	1	601	91	-	- - -	-	1	400	91
	To Captains of "Britannia," and Royal Yacht -	- - -	750 - -	{ Command Money included in Special Rate of Pay - - }	- - -	- - -	-	- - -	-	1	750	-	1	750	-	-	- - -	-
Commanders - - -	In Command - - -	1 - -	365 - -	{ Command Money { In Seagoing Ships - 3 9 68 8 9 In Harbour Ships - 2 6 45 12 6 }	- 3 9	68 8 9	61	22,265	4,151	4	1,460	182	2	730	114	3	1,095	205
	Employed on Special Service, but not in command of a Ship	1 - -	365 - -	{ Allowance (except when employed on Surveying Service) }	- 2 6	45 12 6	-	- - -	-	- - -	- - -	- - -	-	- - -	-	3	1,095	-
	All others - - -	1 - -	365 - -	- - - -	- - -	- - -	30	10,950	-	3	1,095	-	13	4,745	-	-	- - -	-
Inspecting Commanders {	In Coast Guard Service on Shore -	1 - -	365 - -	- - - -	- - -	- - -	-	- - -	-	- - -	- - -	- - -	-	- - -	-	-	- - -	-
Deputy Inspectors General of Hospitals and Fleets - - -	- - - -	{ 1 15 - 1 10 -	{ 638 15 - 547 10 -	- - - -	- - -	- - -	-	- - -	-	- - -	- - -	- - -	1	639	-	-	- - -	-
Chief Inspectors of Machinery Afloat - - -	- - - -	1 7 5	500 7 1	- - - -	- - -	- - -	-	- - -	-	- - -	- - -	- - -	5	2,502	-	-	- - -	-
Inspectors of Machinery Afloat - - -	- - - -	1 4 8	450 3 4	- - - -	- - -	- - -	1	450	-	1	450	-	1	450	-	-	- - -	-
Lieutenants - - -	In Command - - -	- 11 -	200 15 -	{ Command Money { In command of any Vessel, or Tender to a Seagoing Ship - In command of any Tender to a Harbour or Coast Guard Ship - }	- 3 9	68 8 9	46	9,235	3,125	7	1,405	320	6	1,204	297	-	- - -	-
	- - - -	- - -	- - -	- - - -	- 2 6	45 12 6	-	- - -	-	- - -	- - -	- - -	-	- - -	-	-	- - -	-
	- - - -	- - -	- - -	- - - -	- 2 6	45 12 6	-	- - -	-	- - -	- - -	- - -	-	- - -	-	-	- - -	-
	Senior in Rated Ships, &c. - -	- 10 -	182 10 -	Allowance { In Rated Ships, or Troop Ships without Commanders - In Rated Ships with Commanders, or Ships commanded by Commanders - }	- 1 6	27 7 6	119	21,718	3,732	7	1,277	283	19	3,467	630	3	548	101
	- - - -	- - -	- - -	- - - -	- - -	- - -	-	- - -	-	- - -	- - -	- - -	-	- - -	-	-	- - -	-
Lieutenants - - -	Gunnery - - -	- 10 -	182 10 -	Allowance { 1st Class - - - 3 6 63 17 6 2d Class - - - 2 6 45 12 6 3d Class - - - 1 6 27 7 6 }	- 3 6	63 17 6	30	5,475	1,077	15	2,738	666	4	730	109	-	- - -	-
	All others - - -	- 10 -	182 10 -	- - - -	- - -	- - -	202	36,865	-	18	3,285	-	24	4,398	-	4	730	-
COMMISSIONED OFFICERS, &c., carried forward - - -							549	136,986	23,736	60	14,462	2,008	90	27,471	3,304	16	4,668	625

* The additional Allowance of £ 258 per annum to the Captain of the "Excellent" as Superintendent of the Royal Naval School of Artillery.

* The additional Allowance of £ 258 per annum to the Captain of the "Excellent," as Superintendent of the Royal Naval College, at Portsmouth, to make his Total Pay, &c., up to 850 l. per annum, is provided for under Vote No. 5, page 28.

EXPLANATORY STATEMENT (A. 1)—continued.

TROOP SHIPS (Imperial Service).			STORE SHIPS.		DRILL SHIPS.		COAST GUARD DISTRICT SHIPS.			COAST GUARD TENDERS (Cruizers).			COAST GUARD on Shore.			TROOP SHIPS (For Indian Service, Overland Route).†			TOTAL Number of each Rank.	TOTAL AMOUNT OF EACH RANK.		TOTAL CHARGE.	RANK.			
No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.	No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		Pay.	Allow- ances.								
	£.	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.							
-	-	-	-	-	-	-	-	-	1	1,095	170	-	-	-	-	-	-	1	1,095	170	1,265	COMMISSIONED OFFICERS, &c.: Commodore of the 1st Class and Controller General of the Coast Guard (borne in H. M. Ship "Pembroke"). Captain and Deputy Controller General of the Coast Guard (borne in H. M. Ship "Pem- broke").				
-	-	-	-	-	-	-	-	-	1	601	99	-	-	-	-	-	-	1	601	99	700					
									2	1,696	269							2	1,696	269	1,965		TOTAL, carried to page 147.			
5	2,000	684	-	-	-	-	-	-	11	6,407	1,706	-	-	-	-	-	-	5	2,000	1,451	99	49,944	18,340	68,284	Captains.	
-	-	-	-	-	-	-	-	-	1	500	91	-	-	-	-	-	-	-	-	-	3	1,501	273	1,774		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1,500	-	-	1,500				
-	-	-	-	-	-	8	2,920	365	-	-	-	1	365	68	-	-	-	-	-	-	79	28,835	5,085	33,920	Commanders.	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1,095	-	1,095		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	16,790	-	16,790		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	23,725	-	-	-	-	65	23,725	-	23,725	Inspecting Commanders.	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1,187	-	1,187		{ Deputy Inspectors General of Hospitals and Fleets.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2,502	-	2,502		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1,350	-	1,350	Inspectors of Machinery Afloat.	
-	-	-	-	-	-	2	402	91	15	3,011	685	-	-	-	-	-	-	-	-	-	76	15,257	4,518	19,775	Lieutenants.	
5	912	228	-	-	-	-	-	-	11	2,008	502	-	-	-	-	-	-	5	913	228	169	30,843	5,704	36,547		
1	182	27	-	-	-	-	-	-	3	547	82	-	-	-	-	-	-	-	-	-	53	9,672	1,961	11,633		
9	1,643	-	-	-	-	-	-	-	7	1,278	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
20	4,737	939	-	-	-	10	3,322	456	48	13,751	3,066	1	365	68	65	23,725	-	15	2,738	-	279	50,937	-	50,937		
																		25	5,651	1,679	884	235,138	35,881	271,019	{ Commissioned Officers, &c., carried forward.	

0.7.

N. B.—Fractional parts of a Pound are not shown in the Totals of the several Ranks and Ratings.

* Riders not shown.

N. B.—Fractional parts of a Pound are not shown in the Totals of the several Ranks and Ratings.

† Vide note at foot of Abstract, page 148.

RANK.	PAY OF EACH RANK.			ALLOWANCES OF EACH RANK.			EFFECTIVE, FOR GENERAL SERVICE.			GUNNERY, and TRAINING SHIPS.			STATIONARY, RECEIVING, and DEPÔT SHIPS (including Yachts).			SURVEYING VESSELS.		
		Daily.	Annual.	Nature.	Daily.	Annual.	No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.	
								Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.
COMMISSIONED OFFICERS, &c.— <i>continued.</i>		£. s. d.	£. s. d.		£. s. d.	£. s. d.		£.	£.		£.	£.		£.	£.		£.	£.
					Brought forward	- - -	549	136,986	23,736	60	14,462	2,008	90	27,471	3,304	16	4,668	625
Inspecting Lieutenants	In Coast Guard Service on Shore	- 10 -	182 10 -	- - - - -	- - - - -	- - - - -	-	-	-	-	-	-	-	-	-	-	-	-
Lieutenants commanding Stations	- ditto -	- 10 -	182 10 -	- - - - -	- - - - -	- - - - -	-	-	-	-	-	-	-	-	-	-	-	-
	In Command	At various Rates, according to length of Service and qualification, from 182 l. 10 s. to 392 l. 7 s. 6 d. per annum -		Command Money.	In command of any Vessel or Tender to a Sea-going Ship -	- 3 9 68 8 9	1	248	68	2	496	91	4	992	206	2	648	137
					In command of any Tender to a Harbour or Coast Guard Ship -	- 2 6 45 12 6												
	In Command, and in Charge of Stores	- -	As above - -	Command Money -	- -	As above - -	3	744	205	1	248	46	7	1,736	456	-	-	-
		- -		Store Allowance -	- -	At various Rates, according to the Rate of the Ship, from 38 l. 0 s. 5 d. to 73 l. per annum -	19	4,792	853	-	-	-	1	248	73	4	912	152
Staff Commanders, and Navigating Lieutenants	In Charge of Stores	- -	As above - -	Allowance -	- -	As above - -	10	2,480	666	-	-	-	2	496	91	-	-	-
	In Flag Ships, and certain Commodore's Ships on Foreign Stations	- -	As above - -	Allowance -	- -	At various Rates, according to the peculiar circumstances of each case, from 2 s. 6 d. to 5 s. a day -	83	19,867	235	3	744	-	31	7,688	10	25	6,917	30
	All others	- -	As above - -	Tuition Allowance in Ships where no Naval Instructor is borne -	- -	£. 5 per annum for each Navigating Midshipman instructed, not deducted from his Pay, as in the case of other young gentlemen -												
Staff Commanders, and Navigating Lieutenants serving as Inspecting Commanders	In Coast Guard Service on Shore	- 10 -	182 10 -	- - - - -	- - - - -	- - - - -	-	-	-	-	-	-	-	-	-	-	-	-
Staff Commanders, and Navigating Lieutenants commanding Stations	In Coast Guard Service on Shore	- 10 -	182 10 -	- - - - -	- - - - -	- - - - -	-	-	-	-	-	-	-	-	-	-	-	-
Chief Officers	In Coast Guard Tenders (Cruisers)	- 11 -	200 15 -	- - - - -	- - - - -	- - - - -	-	-	-	-	-	-	-	-	-	-	-	-
Chief Engineers	At various Rates, according to length of Service and qualification, from 191 l. 12 s. 6 d. to 365 l. per annum -	- - -	- - -	Allowance for Charge of Engines -	- - -	At various Rates, according to the Horse-power of the Engines, from 18 l. 5 s. to 54 l. 15 s. per annum -	104	25,305	3,432	2	487	91	85	20,682	1,542	-	-	-
	Acting also as Naval Instructors -	At various Rates, according to length of Service, from 182 l. 10 s. to 292 l. per annum -		Additional Pay -	- - -	At various Rates, according to their length of Service as Naval Instructors, from 95 l. 16 s. 3 d. to 177 l. 18 s. 9 d. per annum -	1	221	137	8	1,768	1,095	2	442	274	-	-	-
Chaplains	Tuition Allowance	- -	- -	- - -	- - -	£. 5 per ann. for each Navigating Midshipman instructed, not deducted from his Pay, as in the case of other young gentlemen -												
	All others	- -	As above - -	- - - - -	- - - - -	- - - - -	50	11,050	-	2	442	-	15	3,315	-	-	-	-
Staff Surgeons	In Flag Ships of Commanders in Chief on Foreign Stations	At various Rates, according to length of Service, from 438 l. to 529 l. 5 s. per annum -		Allowance for extra Duties in such Ships -	- - -	- 5 - 91 5 -	5	2,245	456	-	-	-	-	-	-	-	-	-
	All others	- -	- -	- - - - -	- - - - -	- - - - -	5	2,354	-	6	2,902	-	11	5,037	-	-	-	-
Surgeons	At various Rates, according to length of Service, from 319 l. 7 s. 6 d. to 401 l. 10 s. per annum -	- - -	- - -	- - - - -	- - - - -	- - - - -	108	38,416	-	8	2,847	-	31	11,032	-	2	730	-
	In Flag Ships and Ships of Commodore's in Command of Stations; and also in Guard Ships of the Steam Reserves, &c. -	At various Rates, according to length of Service, from 249 l. 8 s. 4 d. to 600 l. 14 s. 7 d. per annum -		Allowance for extra Duties in such Ships -	- - -	At various Rates, according to the circumstances of each case, from 2 s. 6 d. to 5 s. a day -	10	3,700	621	2	740	164	13	4,810	803	-	-	-
Paymasters	All others	- -	As above - -	- - - - -	- - - - -	- - - - -	96	35,535	-	7 including 1 acting as clerk.	2,469	-	11	4,070	-	3	1,095	-
Naval Instructors	At various Rates, according to length of Service, from 182 l. 10 s. to 292 l. per annum -	- - -	- - -	Tuition Allowance -	- - -	£. 5 per annum for each Navigating Midshipman instructed, not deducted from his Pay as in the case of other young gentlemen -	48	10,073	365	14	2,765	-	-	-	-	-	-	-
Sub-Lieutenants	- - - - -	- 5 -	91 5 -	- - - - -	- - - - -	- - - - -	199	18,159	-	20	1,825	-	-	-	-	2	182	-
COMMISSIONED OFFICERS, &c., carried forward							1,291	312,175	30,889	135	32,195	3,533	303	88,019	7,116	54	15,152	944

N.B.—Fractional parts of a Pound are not shown in the Totals of the several Ranks and Ratings.

EXPLANATORY STATEMENT (A. 1.)—continued.

TROOP SHIPS (Imperial Service).			STORE SHIPS.			DRILL SHIPS.			COAST GUARD DISTRICT SHIPS.			COAST GUARD TENDERS (Cruisers).			COAST GUARD <i>on Shore</i> .			TROOP SHIPS (for Indian Service, Overland Route).*			TOTAL	TOTAL AMOUNT of EACH RANK.		TOTAL	RANK.	
No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		Number of each Rank.	Pay.	Allowances.	CHARGE.		
	Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.						Pay.
20	£.	£.	-	£.	£.	10	£.	£.	48	£.	£.	1	£.	£.	65	£.	£.	25	£.	£.	884	£.	£.	£.	{ COMMISSIONED OFFICERS, &c —continued. Inspecting Lieutenants. Lieutenants commanding Sta- tions.	
-	4,737	939	-	-	-	-	3,322	456	-	13,751	3,066	-	365	68	15	23,725	The Special Allow- ances to 4 In- specting Lieute- nants and Lieute- nants commanding Stations is provided for in a separate Item, "Special Pay, &c." For particu- lars, see State- ment (A. 2), page 154.	-	5,651	1,679	15	2,738	-	-		2,738
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	2,738	-	-	-	28	5,110	-	-	5,110		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,110	-	-	-	-	-	-	-	5,110		
-	-	-	4	992	274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	3,376	776	4,152	{ Staff Commanders, and Navigating Lieutenants.	
-	-	-	2	496	{ 137 121 }	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	3,224	{ 844 631 }	4,699		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	5,952	1,078	7,030		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	2,976	757	3,733		
5	1,240	25	1	248	-	-	-	-	11	2,728	5	-	-	-	-	-	-	5	1,277	-	164	40,709	305	41,014	{ Staff Commanders, and Navi- gating Lieutenants serving as Inspecting Commanders. Staff Commanders, and Navi- gating Lieutenants commanding Stations.	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1,095	The Special Allow- ances to 3, is pro- vided for in a sepa- rate Item, "Spe- cial Pay, &c." For particulars, see Statement (A. 2), page 154.	-	-	-	6	1,095	-	-		1,095
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	6,387	-	-	-	-	35	6,387	-	-		6,387
-	-	-	-	-	-	-	-	-	-	-	-	14	2,811	-	-	-	-	-	-	-	14	2,811	-	-	2,811	Chief Officers.
5	1,217	201	3	730	82	-	-	-	11	2,676	447	-	-	-	-	-	-	5	1,415	274	215	52,512	6,069	58,581	Chief Engineers.	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	2,431	{ 1,506 - }	3,937	{ Chaplains.	
-	-	-	-	-	-	-	-	-	11	2,431	-	-	-	-	-	-	-	5	913	-	83	18,151	-	-		18,151
1	529	-	-	-	-	8	3,723	-	4	1,807	-	-	-	-	-	-	-	-	-	5	2,245	456	2,701	{ Staff Surgeons.		
4	1,423	-	-	-	-	2	712	-	11	3,915	-	-	-	-	-	-	-	5	1,597	-	35	16,352	-		-	16,352
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	60,672	-	-	60,672	Surgeons.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	9,250	1,588	10,838	{ Paymasters.	
5	1,850	-	1	370	-	11	4,070	-	11	4,070	-	-	-	-	12	6,704	-	5	2,372	-	162	62,605	-	-		62,605
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	12,838	365	13,203		Naval Instructors.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	221	20,166	-	-	20,166	Sub-Lieutenants.
40	10,996	1,165	11	2,836	614	31	11,827	456	107	31,378	3,518	15	3,176	68	161	45,759	-	50	13,225	1,953	2,198	566,738	50,256	616,994	{ Commissioned Officers, &c.— carried forward.	

0.7.

Vide Note at foot of Abstract, page 148.

* Vide Note at foot of Abstract, page 148.

N.B.—Fractional parts of a Pound are not shown in the Totals of the several Ranks and Ratings.

EXPLANATORY STATEMENT (A. 1)—continued.

TROOP SHIPS (Imperial Service).			STORE SHIPS.			DRILL SHIPS.			COAST GUARD DISTRICT SHIPS.			COAST GUARD TENDERS (Cruisers).			COAST GUARD on Shore.			TROOP SHIPS (for Indian Service, Overland Route). *			TOTAL Number of each Rank.	TOTAL AMOUNT of EACH RANK.		TOTAL CHARGE.	R A N K.				
No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.			Pay.	Allow- ances.						
	£.	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.	£.		£.	£.	£.					
40	10,996	1,165	11	2,836	614	31	11,827	456	107	31,378	3,518	15	3,176	68	161	45,759	-	50	13,225	1,953	2,198	566,738	50,256	616,994	COMMISSIONED OFFICERS &c. —continued. Chief Gunners.				
-	-	-	-	-	-	1	164	-	1	164	-	-	-	-	-	-	-	-	-	-	35	5,748	41	5,789		Chief Boatswains.			
5	1,049	-	6	1,258	-	-	-	-	8	1,787	-	-	-	-	-	-	-	5	1,140	-	241	51,315	-	51,315	Chief Carpenters.				
-	-	-	5	1,050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	7,976	-	7,976	Assistant Surgeons.				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	2,737	548	3,285	Assistant Paymasters in Charge.				
6	548	-	9	958	15	-	-	-	-	-	-	-	-	-	-	-	-	10	1,140	-	146	16,790	125	16,915		Navigating Sub-Lieutenants.			
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	91	55	-	-	-	1	91	55	146	Navigating Sub - Lieutenants, serving as Inspecting Com- manders.				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	639	383	-	-	-	7	639	383	1,022	Navigating Sub - Lieutenants, commanding Stations.					
-	-	-	-	-	-	-	-	-	-	-	-	21 5	2,372	The Special Allow- ance to each is provided for in a separate Item, "Special Pay, &c." For parti- culars, see State- ment (A. 2) p. 154	-	-	-	-	-	-	21	2,372	-	2,372	Senior Mates.				
5	639	-	-	-	-	1	128	-	35	4,471	-				-	-	-	-	-	5	821		-	197	25,350	-	25,350	Assistant Paymasters.	
30	4,517	-	21	3,093	55	3	465	37	72	11,443	283	6	931	55	-	-	-	38	5,548	-	1,115	165,193	3,778	168,971	Engineers and Assistant Engi- neers.				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	156	-	156	Engine Fitter, for Coaling Ma- chinery (borne in H. M. Ship "Flora," at Ascension).				
necessary for these Services, as the amount of few instances (if any) of Officers who would be would be very trifling			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No separate provision necessary. See Note under Surveying Vessels, &c.		-	-	9,500	-	9,500	Extension of Full Pay to Of- ficers granted leave of Absence for limited periods on their return from Service on Foreign Stations, under H. M. Order in Council of 3rd August 1867.				
86	17,749	1,165	52	9,195	684	36	12,584	493	223	49,243	3,801	47	6,479	123	169	46,489	438	108	21,874	1,953	4,025	854,605	55,186	909,791	TOTAL, COMMISSIONED OFFI- CERS, &c.				
3	219	-	-	-	-	-	-	-	9	657	-	-	-	-	-	-	-	-	-	-	223	7,122	-	7,122	SUBORDINATE OFFICERS: Midshipmen. Clerks.				
5	355	-	4	284	-	-	-	-	1	73	-	-	-	-	-	-	-	5	365	-	101	7,373	-	7,373		Navigating Midshipmen.			
-	-	-	-	-	-	-	-	-	-	-	-	6	493	-	-	-	-	-	-	-	163	11,579	-	11,579	Second Mates.				
-	-	-	-	-	-	-	-	-	-	-	-	16	876	-	-	-	-	-	-	6	493	-	493	Naval Cadets.					
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	876	-	876	(Vide page 155, for the num- ber admitted during the year.)					
2	91	-	3	137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	3,011	-	3,011	Assistant Clerks.					
10	665	-	7	421	-	-	-	-	10	730	-	22	1,369	-	-	-	-	-	-	84	3,833	-	3,833	TOTAL, SUBORDINATE OFFICERS.					
96	18,414	1,165	59	9,616	684	36	12,584	493	233	49,973	3,801	69	7,848	123	169	46,489	438	5	365	-	773	34,287	-		34,287	TOTAL, COMMISSIONED and SUBORDINATE OFFICERS, carried forward.			
																					113	22,239	1,953	4,798	888,892	55,186	944,078		

0.7.

* Vide Note at foot of Abstract, page 148.

* Vide Note at foot of Abstract, page 148.

RANK.	PAY OF EACH RANK.			ALLOWANCES OF EACH RANK.			EFFECTIVE, FOR GENERAL SERVICE.			GUNNERY, and TRAINING SHIPS.			STATIONARY, RECEIVING, and DEPÔT SHIPS (including Yachts).			SURVEYING VESSELS.			
	—	Daily.	Annual.	Nature.	Daily.	Annual.	No. of Rank.	Total per Annum.		No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Annum.		
		£. s. d.	£. s. d.		£. s. d.	£. s. d.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.	Pay.
TOTAL, COMMISSIONED AND SUBORDINATE OFFICERS, brought forward - - -							2,908	496,997	33,034	185	39,109	3,569	830	165,383	8,854	100	20,240	1,072	
WARRANT OFFICERS:																			
Gunners - - -	Sea Pay {	1st Class - - -	7 - -	127 15 -	{ Tool Money to Carpenters when on Sea Pay - - }	- - 3	4 11 3	385	39,585	408	160	16,699	100	474	49,877	200	1	91	-
Boatswains - - -		2d ditto - - -	6 - -	109 10 -															
Carpenters - - -		3d ditto - - -	5 - -	91 5 -															
Chief Officers, 2d Class {	Harbour Service {	1st Class - - -	6 - -	109 10 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		2d ditto - - -	5 - -	91 5 -															
		3d ditto - - -	4 - -	73 - -															
In Coast Guard Ser-vice on Shore - - -							- 6 -	109 10 -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	
TOTAL, WARRANT OFFICERS - - -							385	39,585	408	160	16,699	100	474	49,877	200	1	91	-	
PETTY OFFICERS AND SEAMEN, &c.:																			
Petty Officers, Leading Seamen, &c. - - -	At various Rates, according to their Classes, &c., from 30 <i>l.</i> 8 <i>s.</i> 4 <i>d.</i> to 109 <i>l.</i> 10 <i>s.</i> per annum - - -				Gratuities, to—		{ 20 - - 5 <i>l.</i> for one, 9 <i>l.</i> for two, 12 <i>l.</i> for three, &c. 6 1 8	9,481	674,359	38,302	{ 1,286	83,475	8,544	{ 1,923	146,738	4,153	{ 127	7,930	330
					Head Naval Schoolmasters of Training Ships (5) - - -														
					Ditto for Pupil Teachers in- structed - - -														
Able, Ordinary, and 2d Class Ordinary Sea- men, &c. - - -	At various Rates, according to their Ratings, from 16 <i>l.</i> 14 <i>s.</i> 7 <i>d.</i> to 28 <i>l.</i> 17 <i>s.</i> 11 <i>d.</i> per annum - - -				Men acting as Sick Berth At- tendants - - -		- - 4	6 1 8	{ 12,126	-	-	{ 1,147	-	{ 2,725	-	-	{ 118	-	-
					Additional Pay, to—														
					Gunnery Instructors - - -														
Chief Boatmen in charge of Stations - - -	In Coast Guard Ser- vice on Shore - - -	- 2 2	39 10 10	Additional Pay - - -	- 1 -	18 5 -	-	-	-	-	-	-	-	-	-	-	-	-	
		- 2 2	39 10 10	Additional Pay, to—	- - 8	12 3 4	-	-	-	-	-	-	-	-	-	-	-		
		- 1 9	31 18 9	Gunnery Instructors - - -	- - 4	6 1 8	-	-	-	-	-	-	-	-	-	-	-		
Commissioned Boatmen of Stations - - -	- - ditto - - -	- 1 7	28 17 11	Seamen—Gunnery { 1st Class - - -	- - 2	3 - 10	-	-	-	-	-	-	-	-	-	-	-	-	
Boatmen of Stations - - -	- - ditto - - -	- 2 9	50 3 9	Trained Men in Gunnery - - -	- - 1	1 10 5	-	-	-	-	-	-	-	-	-	-	-	-	
Divisional Carpenters - - -	- - ditto - - -	- - -	- - -	- - -	- - -	- - -	-	-	-	-	-	-	-	-	-	-	-	-	
TOTAL, PETTY OFFICERS AND SEAMEN, &c. - - -							21,607	674,359	38,302	2,433	83,475	8,544	4,648	146,738	4,153	245	7,930	330	
TOTAL of all CLASSES (except Flag Officers, &c., and Boys) - - -							24,900	1,210,941	71,744	2,778	139,283	12,213	5,952	361,998	13,207	346	28,261	1,402	
Boys - - -	At Rates, according to their Classes, viz., 1st Class, 10 <i>l.</i> 12 <i>s.</i> 11 <i>d.</i> , and 2d Class, 9 <i>l.</i> 2 <i>s.</i> 6 <i>d.</i> per annum - - -				Allowance to Pupil Teachers in Training Ships, subject to con- ditions as to conduct and proficiency - - -		1st Year's Service. - - 2 2d ditto - - 4 3rd ditto - - 6 4th ditto - - 8	3,874	41,244	-	{ 3,220 including 3,100 for training.	29,448	309	191	1,995	-	23	244	-
					TOTAL of all CLASSES (except Flag Officers, &c.) - - -		28,774	1,252,185	71,744	-	5,998 including 3,100 Boys for training.	168,731	12,522	6,143	363,993	13,207	369	28,505	1,402
					£. 1,323,929		£. 181,253	£. 377,200	£. 29,907										

N.B.—Fractional parts of a Pound are not shown in the Totals of the several Ranks and Ratings.

EXPLANATORY STATEMENT (A. 1)—continued.

TROOP SHIPS (Imperial Service).			STORE SHIPS.			DRILL SHIPS.			COAST GUARD DISTRICT SHIPS.			COAST GUARD TENDERS (Cruisers).			COAST GUARD on Shore.			TROOP SHIPS (for Indian Service, Overland Route).*			TOTAL Number of each Rank.	TOTAL AMOUNT of EACH RANK.		TOTAL CHARGE.	RANK.
No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Annum.		No. of each Rank.	Total per Ann.		No. of each Rank.	Total per Ann.			Pay.	Allow- ances.	£.	
	Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allow- ances.		Pay.	Allowances.		Pay.	Allow- ances.		Pay.	Allow- ances.		£.	£.	£.	
96	18,414	1,165	59	9,616	684	36	12,584	493	233	49,973	3,801	69	7,848	123	169	46,489	438	113	22,239	1,953	4,798	888,892	55,186	944,078	{ TOTAL, COMMISSIONED AND SUBORDINATE OFFICERS, brought forward.
30	3,230	23	17	1,679	18	26	2,810	37	60	7,391	50	-	-	-	-	-	-	35	3,467	23	1,188	124,829	859	125,688	WARRANT OFFICERS:
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	208	22,776	-	-	-	-	208	22,776	-	22,776	{ Gunners. Boatswains. Carpenters.
30	3,230	23	17	1,679	18	26	2,810	37	60	7,391	50	-	-	-	208	22,776	-	35	3,467	23	1,396	147,005	859	148,464	Chief Officers, 2d Class.
																									TOTAL, WARRANT OFFICERS.
PETTY OFFICERS AND SEAMEN, &c.:																									
{ 351 }	22,037	557	{ 148 }	9,904	331	{ 46 }	6,465	1,420	{ 757 }	58,637	3,412	{ 150 }	18,855	219	-	-	-	{ 650 }	33,404	1,157	{ 14,919 }	1,061,804	58,425	1,120,229	{ Petty Officers, Leading Sea- men, &c.
{ 321 }			{ 167 }			{ 174 }			{ 1,120 }			{ 449 }						{ 467 }			{ 18,814 }				{ Able, Ordinary, and 2d Class Ordinary Seamen, &c.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	176	6,960	3,212	-	-	-	176	6,960	3,212	10,172	{ Chief Boatmen in charge of Stations.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,947	124,076	6,702	-	-	-	3,947	124,076	6,702	130,778	{ Chief Boatmen of Stations. Commissioned Boatmen of Sta- tions. Boatmen of Stations. Divisional Carpenters.
672	22,007	557	315	9,904	331	220	6,465	1,420	1,877	58,637	3,412	599	18,855	219	4,123	131,036	9,914	1,117	33,404	1,157	37,856	1,192,840	68,339	1,261,179	{ TOTAL, PETTY OFFICERS AND SEAMEN, &c.
798	43,681	1,745	391	21,109	1,033	282	21,859	1,950	2,170	116,001	7,263	668	26,703	342	4,500	200,301	10,352	1,265	59,110	3,133	44,050	2,220,337	124,934	2,353,721	{ TOTAL of all CLASSES (except Flag Officers, &c., and Boys).
56	596	-	36	383	-	-	-	-	190	2,022	-	170	1,639	-	-	-	-	5	53	-	7,765 including 3,100 for training.	77,674	309	77,983	Boys.
854	44,277	1,745	427	21,582	1,033	282	21,859	1,950	2,360	118,023	7,263	838	28,392	342	4,500	200,301	10,352	1,270	59,163	3,133	51,815 including 3,100 Boys for training.	2,307,011	124,093	2,431,704	{ TOTAL of all CLASSES (except Flag Officers, &c.)
																					253	40,817	21,690	62,507	{ Flag Officers, &c., brought from page 138.
																					2	1,696	269	1,965	{ Commodore, &c., of Coast Guard, brought from p. 140.
																					52,070	2,349,524	146,652	2,496,176	TOTALS of all SERVICES.

FLAG OFFICERS AND SUPERINTENDENTS OF DOCK YARDS, &c., brought from page 138

COMMODORE, &c., of COAST GUARD, brought from page 140

TOTALS of all SERVICES

FOR ABSTRACT OF THE FOREGOING STATEMENT, See next page.

* Vide Note at foot of Abstract, next page.

ABSTRACT of the FOREGOING STATEMENT, showing the TOTAL NUMBER and AMOUNT

HEADS OF SERVICE.	FLAG OFFICERS, &c.			OFFICERS SUPERINTENDING DOCKYARDS, &c.			COMMISSIONED OFFICERS, &c.			SUBORDINATE OFFICERS.			WARRANT OFFICERS.		
	No.	Pay.	Allowances.	No.	Pay.	Allowances.	No.	Pay.	Allowances.	No.	Pay.	Allowances.	No.	Pay.	Allowances.
		£.	£.		£.	£.		£.	£.		£.	£.		£.	£.
FLAG OFFICERS, &c. - -	195	30,798	18,980	58	10,019	2,710	-	-	-	-	-	-	-	-	-
EFFECTIVE, for General Service	-	-	-	-	-	-	2,243	469,514	33,034	665	27,483	-	385	39,585	408
GUNNERY, and TRAINING SHIPS	-	-	-	-	-	-	174	38,470	3,569	11	639	-	160	16,699	100
STATIONARY SHIPS, &c. - -	-	-	-	-	-	-	801	163,512	8,854	29	1,871	-	474	49,877	200
SURVEYING VESSELS - -	-	-	-	-	-	-	86	19,496	1,072	14	744	-	1	91	-
TROOP SHIPS (Imperial Service) -	-	-	-	-	-	-	86	17,749	1,165	10	665	-	30	3,230	23
STORE SHIPS - - - -	-	-	-	-	-	-	52	9,195	684	7	421	-	17	1,679	18
DRILL SHIPS - - - -	-	-	-	-	-	-	36	12,584	493	-	-	-	26	2,810	37
TOTALS - - -	195	30,798	18,980	58	10,019	2,710	3,478	730,520	48,871	736	31,823	-	1,093	113,971	786
Numbers and Amounts for Her Majesty's Fleet, as provided for in the body of the Estimate (page 7) -	No. 195 - £. 49,778			No. 58 - £. 12,729			No. 3,478 - £. 779,391			No. 736 - £. 31,823			No. 1,093 - £. 114,757.		
COAST GUARD SERVICE AFLOAT:	COMMODORE CONTROLLER-GENERAL of the COAST GUARD.			DEPUTY CONTROLLER-GENERAL of the COAST GUARD.											
COMMODORE, &c. - -	1	1,095	170	1	601	99	-	-	-	-	-	-	-	-	-
DISTRICT SHIPS - - -	-	-	-	-	-	-	223	49,243	3,801	10	730	-	60	7,391	50
TENDERS (Cruizers) - -	-	-	-	-	-	-	47	6,479	123	22	1,369	-	-	-	-
TOTALS - - -	1	1,095	170	1	601	99	270	55,722	3,924	32	2,099	-	60	7,391	50
COAST GUARD SERVICE ON SHORE - - -	-	-	-	-	-	-	169	46,489	438	-	-	-	208	22,776	-
*TROOP SHIPS FOR INDIAN SERVICE, OVERLAND ROUTE - - -	-	-	-	-	-	-	108	21,874	1,953	5	365	-	35	3,467	23

* Note.—The Troop Ships for the Indian Service (five in number) comprise two ships for service on the European side of the Isthmus of Suez, and three ships for service on the Indian side of the Isthmus. Last year (1867-68), upon the supposition that the whole expense of the pay, &c., of the Officers and Crews of the five ships would be borne by the Indian Government, the amount was deducted at the end of the Estimate for Vote 1. This year (1868-69) it will be defrayed as follows, viz.:—The expense of the two *European* ships will be divided between the Imperial and the Indian Governments in the proportions of two-fifths to the former (in consideration of such ships being available for the Imperial service for a portion of the year), and three fifths to the latter. The Indian proportion is provided for along with the Imperial proportion in the body of the Estimate for Vote 1 (page 8), as all payments on account of it will be made out of Imperial Funds, and be charged to such Vote; but the amount will be recovered by the Admiralty from the Indian Government, and paid into the Imperial Exchequer; the same being then shown in the Account of Extra Naval Receipts (at page 180), in accordance with the directions of the Lords of the Treasury.

The whole expense of the three *Indian* ships will be borne by the Indian Government, out of whose funds all payments on account thereof will be made. The full amount, therefore, (except for Marines) for these three ships is deducted from the total of this Abstract; but the *Officers and Men* are not deducted, as they are included in the total number to be voted for the Fleet, &c., being all borne on ships' books as *belonging to the Navy*.

The estimated expense for pay, &c., of the Officers and Crews (except Marines) of the two *European* and the three *Indian* ships, respectively, is as follows, viz.:—

	Number.	Amount.	Amount to be deducted from Vote No. 1.
		£.	
The two ships on the European side of the Isthmus of Suez - - -	472	24,954	
The three ships on the Indian side of the Isthmus of Suez - - -	798	37,342	
TOTAL - - -	1,270	62,296	

EXPLANATORY STATEMENT (A. 1)—continued.

of each CLASS, &c., as provided for in the body of the Estimate, at page 7.

PETTY OFFICERS AND SEAMEN.			TOTAL.			TOTAL.	Boys.			GRAND TOTAL.		HEADS OF SERVICE.
No.	Pay.	Allowances.	No.	Pay.	Allowances.	Pay and Allowances.	No.	Pay.	Allowances.	No.	Pay and Allowances.	
£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	
-	-	-	253	40,817	21,690	62,507	-	-	-	253	62,507	FLAG OFFICERS, &c.
21,607	674,359	38,302	24,900	1,210,941	71,744	1,282,685	3,874	41,244	-	28,774	1,323,929	EFFECTIVE, for General Service.
2,433	83,475	8,544	2,778	139,288	12,213	151,496	3,220	29,448	309	5,998	181,253	GUNNERY, and TRAINING SHIPS.
4,648	146,738	4,153	5,952	361,998	13,207	375,205	191	1,995	-	6,143	377,200	STATIONARY SHIPS, &c.
245	7,930	330	346	28,261	1,402	29,663	23	244	-	369	29,907	SURVEYING VESSELS.
672	22,037	557	798	43,681	1,745	45,426	56	596	-	854	46,022	TROOP SHIPS (Imperial Service).
315	9,904	331	391	21,199	1,033	22,232	36	383	-	427	22,615	STORE SHIPS.
220	6,465	1,420	282	21,859	1,950	23,809	-	-	-	282	23,809	DRILL SHIPS.
30,140	950,908	53,637	35,700	1,868,039	124,984	1,993,023	7,400	73,910	309	43,100	2,067,242	TOTALS.
No. 30,140 - £. 1,004,545			No. 35,700 - £. 1,993,023			{ No. 7,400 - £. 74,219 including Boys for Training, as above. }			No. 43,100 - £. 2,067,242			Numbers and Amounts for Her Majesty's Fleet, as provided for in the body of the Estimate (page 7).
-	-	-	2	1,696	269	1,965	-	-	-	2	1,965	COAST GUARD SERVICE AFLOAT:
1,877	58,637	3,412	2,170	116,001	7,263	123,264	190	2,022	-	2,360	125,286	COMMODORE, &c.
599	18,855	219	668	26,703	342	27,045	170	1,689	-	838	28,734	DISTRICT SHIPS.
2,476	77,492	3,631	2,840	144,400	7,874	152,274	360	3,711	-	No. 3,200	£. 155,985	TENDERS (Cruisers).
4,123	131,036	9,914	4,500	200,301	10,352	210,653	-	-	-	No. 4,500	£. 210,653	TOTAL Number and Amount for Her Majesty's Coast Guard Service Afloat, as provided for in the body of the Estimate (page 7).
TOTAL for HER MAJESTY'S FLEET and COAST GUARD SERVICE, as provided for in the body of the Estimate (page 7) -										No. 50,800	£. 2,433,880	COAST GUARD SERVICE ON SHORE. Total Number and Amount, as provided for in the body of the Estimate (page 7).
1,117	33,404	1,157	1,265	59,110	3,133	62,243	5	53	-	No. 1,270	£. 62,296	TROOP SHIPS FOR INDIAN SERVICE, OVERLAND ROUTE. Total Number and Amount as provided for in the body of the Estimate (page 8).*
TOTAL of all SERVICES, as provided for in the body of the Estimate (page 8) -										No. 52,070	£. 2,496,176	
Add,—Special Pay and Allowances, as per Statement (A. No. 2) annexed (page 154) -										-	20,304	
Estimated Cost of Good Conduct Pay, &c., as shown in the body of the Estimate (page 8) -										-	42,800	
Estimated Expense of raising Men and Boys for the Fleet, as shown in the body of the Estimate (page 8) -										-	1,700	
TOTAL AMOUNT, as provided for in the body of the Estimate, of "WAGES, &c., to SEAMEN" (page 8) -										-	2,560,980	
DEDUCT the following Sums, for the Services named (which are chargeable to the Votes, &c. specified, but are included above, as the Officers and Men to whom they relate are borne on Ships Books as belonging to the Navy, and are comprised in the Total Number to be Voted for the Fleet, &c.) viz:—												
The Pay and Allowances of Officers superintending Her Majesty's Dockyards and Naval Establishments, and their Retinues; provision for the same being made in the Estimate for Dockyards, &c. (Vote 6, page 29), as part of the Cost of those Establishments -										£.		
The Pay and Allowances of the Officers and Crews (except Marines) of the three Indian Troop Ships employed on the Indian side of the Isthmus of Suez, as the same will be defrayed by the Indian Government, vide Note *										12,729		
										37,342		
NET TOTAL WAGES, &c., to SEAMEN in FLEET and COAST GUARD SERVICE, &c.										50,071		
										£. 2,510,909		

EXPLANATORY STATEMENT (A. 2).

[*Note.*—The following, being of an exceptional character, are not included with the Pay and *Established Allowances* of the Fleet, &c., in the previous portion of this Statement.]

R A N K.	Num-ber.	DESCRIPTION OF PAY, &c.	ANNUAL AMOUNT.	TOTAL AMOUNT.	TOTAL AMOUNT of the Whole.
Vice Admiral of Great Britain and Ire- land - - - - -	1	{ By Patent - - - - - }	£. s. d. 484 1 9	776 10 9	
Rear Admiral of Great Britain and Ire- land - - - - -	1		342 9 -		
		Daily. Annual.			
Naval Aides-de-Camp to Her Majesty {	1	Principal - - - £. 1 - -	£. 365 - -	1,460 - -	
	6	Senior - - - - - 10 -	182 10 -		
RIO DE JANEIRO:					
Navigating Lieutenant of Her Majesty's Ship "Egmont," at Rio de Janeiro -}	1	{ Allowance, in addition to his Pay, for charge of Naval Stores - - - - - }	60 - -		
Surgeon of - - ditto - at ditto -	1	{ Allowance, in addition to his Pay, for charge of Medi- cal Stores of the Squadron on South East Coast of America Station - - - - - }	30 - -		
Paymaster of - ditto - at ditto -	1	{ Allowance, in addition to his Pay, for charge of Vic- tualling Stores - - - - - }	60 - -	150 - -	
VALPARAISO:					
Staff Commander of Her Majesty's Ship "Nereus," Store Depôt at Valpa- raiso - - - - -	1	{ Allowance, in addition to his Pay, for charge of Naval Stores, including 10 <i>l</i> . in lieu of Stationery, &c., and 10 <i>l</i> . for Postage - - - - - }	120 - -		
Assistant Surgeon of ditto - at ditto -	1	{ Allowance, in addition to his Pay, for charge of Medi- cines, &c., for issue to the Squadron on the Pacific Station - - - - - }	20 - -	140 - -	
ESQUIMALT (VANCOUVER'S ISLAND):					
Surgeon in charge of Temporary Naval Hospital at Esquimalt, borne in Her Majesty's Ship "Zealous" - - -}	1	Allowance, in addition to his Pay, for charge of Stores	20 - -	20 - -	
TRINCOMALEE:					
Surgeon (additional), borne in Her Ma- jesty's Ship "Octavia" - - -}	1	{ Allowance, in addition to his Pay, for charge of Naval Medical Depôt - - - - - }	30 - -	30 - -	
Carried forward - - - £.			- -	2,576 10 9	

APPENDIX, No. 2.—EXPLANATORY STATEMENT (A. 2)—continued.

RANK.	Number.	DESCRIPTION OF PAY, &c.	ANNUAL AMOUNT.	TOTAL AMOUNT.	TOTAL AMOUNT of the Whole.
SPECIAL PAY AND ALLOWANCES—continued.			£. s. d.	£. s. d.	£. s. d.
		Brought forward - - -	- - -	2,576 10 9	
YOKOHAMA (JAPAN):					
Surgeon (additional), borne in Her Majesty's Ship "Rodney" - - -	1	{ Allowance, in addition to his Pay, in lieu of Stationery, } for Service at Sick Quarters - - - - -	2 2 -	2 2 -	
SHANGHAI:					
Paymaster (additional), borne in Her Majesty's Ship "Acorn" - - -	1	{ Allowance, in addition to his Pay, for Charge of Naval } and Victualling Stores, including 15 l. in lieu of } Stationery - - - - -	115 - -		
Assistant Paymaster of ditto - - -	1	{ Allowance, in addition to his Pay, for Residence on } Shore - - - - -	100 - -		
Assistant Paymaster (additional), employed as Senior Officer's Clerk, borne in Her Majesty's Ship "Rodney" - -	1	{ Allowance, in addition to his Pay, of 2 s. 6 d. a day, } or 45 l. 12 s. 6 d. a year - - - - -	45 12 6		
Clerk (additional), employed at the Naval Stores - - - - -	1	{ Allowance, in addition to his Pay, of 2 s. 6 d. a day, } or 45 l. 12 s. 6 d. a year - - - - -	45 12 6		
Yeomen of Store-rooms (additional), borne in Her Majesty's Ship "Acorn" }	2	{ Allowance to each, in addition to his Pay, of 1 s. a day, } or 18 l. 5 s. a year, as Assistant Store Issuers in the } Naval Yard - - - - -	36 10 -	342 15 -	
ASCENSION:					
Cooks employed in the Mountain and Garrison Hospitals at Ascension, borne in Her Majesty's Ship "Flora" - -	2	{ Allowance to each, in addition to his Pay, of 1 s. a } day, or 18 l. 5 s. a year - - - - -	36 10 -		
Baker at Ascension, borne in ditto - - -	1	{ Allowance, in addition to his Pay as Captain's Cook, } of 1 s. a day, or 18 l. 5 s. a year - - - - -	18 5 -		
Assistant Baker - ditto - ditto - - -	1	{ Allowance, in addition to his Pay as Ordinary Sea- } man, of 9 d. a day, or 13 l. 13 s. 9 d. a year - - -	13 13 9		
Corporal of Royal Marines at Ascension, borne in ditto - - - - -	1	{ Allowance, in addition to his Pay, for acting as School- } master on Shore - - - - -	16 - -	84 8 9	
HER MAJESTY'S SHIP "EXCELLENT":					
Mathematical and Naval Instructors - - -	2	{ Allowance to each, in addition to his Pay, of 160 l. a } year, in lieu of 5 l. a year for each young gentleman } instructed - - - - -	320 - -		
Naval Instructor at the Royal Naval College - - - - -	1	{ Allowance, in addition to his Pay, in lieu of House- } rent and Tuition Money - - - - -	140 2 6		
Naval Schoolmaster - - - - -	1	Allowance in addition to his Pay - - - - -	20 - -		
Monitors, in lieu of Pupil Teachers - - -	2	{ Allowance to each, in addition to his Pay, of 6 d. a } week, for Service with Boys under Training - - -	2 12 -	482 14 6	
		Carried forward - - - £.	- - -	3,488 11 -	

APPENDIX, No. 2.—EXPLANATORY STATEMENT (A. 2)—continued.

RANK.	Number.	DESCRIPTION OF PAY, &c.	ANNUAL AMOUNT.	TOTAL AMOUNT.	TOTAL AMOUNT of the Whole
SPECIAL PAY AND ALLOWANCES—continued.			£. s. d.	£. s. d.	£. s. d.
		Brought forward - - -	- - -	3,488 11 -	
HER MAJESTY'S SHIP "BRITANNIA":					
Principal Naval Instructor - - -	1	{ Salary, in addition to his Pay, in lieu of 9 <i>l.</i> a year for each Naval Cadet instructed - - - }	250 - -		
Second Naval Instructor - - -	1	Ditto - - - ditto - - - ditto - - -	200 - -		
Junior Naval Instructors - - -	6	{ Allowance to each, in addition to his Pay, of 125 <i>l.</i> a year as Tuition Money - - - }	750 - -		
Acting Naval Instructors - - -	2	{ Allowance to each, in addition to his Pay, of 1 <i>s.</i> 6 <i>d.</i> a day, or 27 <i>l.</i> 7 <i>s.</i> 6 <i>d.</i> a year, in lieu of Tuition Money - - - }	54 15 -		
French and Drawing Masters - - -	2	{ Salary, at the rate of 400 <i>l.</i> a year each, for instructing Naval Cadets - - - }	800 - -		
Assistant French and Drawing Masters - - -	2	{ Salary, at the rate of 200 <i>l.</i> a year each, for instructing Naval Cadets - - - }	400 - -		
Steward of Naval Cadets' Mess - - -	1	{ Allowance, in addition to his Pay, of 8 <i>d.</i> a day, or 12 <i>l.</i> 3 <i>s.</i> 4 <i>d.</i> a year, for charge of Naval Stores supplied to the Mess - - - }	12 3 4		
Sailmaker - - - - -	1	{ Allowance, in addition to his Pay, of 6 <i>d.</i> a day, or 9 <i>l.</i> 2 <i>s.</i> 6 <i>d.</i> a year, for instructing Naval Cadets in Sailmaking - - - }	9 2 6		
Surgeon				2,476 - 10	
HER MAJESTY'S SHIP "SAINT GEORGE":					
Pay Staff Commander - - - - -	1	{ Allowance, in addition to his Pay, of 100 <i>l.</i> a year, for instructing Navigating Cadets in Seamanship, &c. - }	100 - -		
Assistant Paymaster - - - - -	1	{ Allowance, in addition to his Pay, of 50 <i>l.</i> a year, in consideration of his responsible Duties - - - }	50 - -		
Principal Naval Instructor - - - - -	1	{ Allowance, in addition to his Pay, of 150 <i>l.</i> a year, for instructing Navigating Cadets - - - }	150 - -		
Assistant ditto - - - - -	1	{ Allowance, in addition to his Pay, of 100 <i>l.</i> a year, for instructing Navigating Cadets - - - }	100 - -		
French and Drawing Master - - - - -	1	{ Salary, at the rate of 250 <i>l.</i> a year, for instructing Navigating Cadets - - - }	250 - -		
				650 - -	
HER MAJESTY'S TRAINING SHIPS:					
Chaplains and Naval Instructors of Her Majesty's Training Ships for Boys, viz:—"St. Vincent," "Boscawen," "Impregnable," "Implacable," and "Ganges" - - - - -	5	{ Allowance to each, in addition to his Pay, of 60 <i>l.</i> a year, in lieu of Tuition Money - - - }	300 - -		
Qualified Pupil Teachers in the above Ships - - - - -	15	{ For their Education and Maintenance while under Training at Chichester and Exeter Colleges, at the rate of 23 <i>l.</i> a year each Pupil Teacher - - - }	345 - -		
				645 - -	
HER MAJESTY'S SHIP "CUMBERLAND":					
Instructor of Engineers, borne in Her Majesty's Ship "Cumberland" - - -	1	{ Pay, at the rate of 450 <i>l.</i> a year, inclusive of all Allowances, for Instructing Engineers in Steam Reserve, at Sheerness - - - }	450 - -		
		Carried forward - - -	£. - - -	7,709 11 10	

APPENDIX, No. 2.—EXPLANATORY STATEMENT (A. 2)—continued.

RANK	Number.	DESCRIPTION OF PAY, &c.	ANNUAL AMOUNT.	TOTAL AMOUNT.	TOTAL AMOUNT of the Whole.
SPECIAL PAY AND ALLOWANCES—continued.			£. s. d.	£. s. d.	£. s. d.
		Brought forward - - -	- - -	7,709 11 10	
LODGING MONEY:					
Secretary to Commander in Chief at Devonport - - - - -	1	Lodging Money - - - - -	50 - -		
Secretary to the Rear Admiral commanding at Cork - - - - -	1	Ditto - - - - -	50 - -		
Secretary to Commodore Superintendent at Woolwich - - - - -	1	Ditto - - - - -	50 - -		
Harbour Master at Portland, borne in Her Majesty's Ship "Asia" - - -	1	Ditto - - - - -	50 - -		
Harbour Master at Falmouth, borne in Her Majesty's Ship "Royal Adelaide" - - - - -	1	Ditto - - - - -	50 - -		
Lieutenants of "Bullfrog" and "Fervent," tenders to "Castor" and "Dædalus," Drill Ships - - - - -	2	Ditto to each of 50 l. a year - - - - -	100 - -		
Staff Surgeons and Surgeons of Drill Ships of the Royal Naval Reserve - -	8	Ditto - - - - ditto - - - - -	400 - -		
Paymasters of ditto - - - - -	8	Ditto - - - - ditto - - - - -	400 - -		
Captain (additional) of Her Majesty's Ship "Pembroke," for service as Inspector of the Royal Naval Reserve - -	1	Lodging Money at the rate of 4 s. 6 d. a day - - -	82 2 6		
Captain of Her Majesty's Ship "Wolverine," employed on special service on the Lakes of Canada - - - - -	1	Ditto at the rate of 2 l. a-week (See also "Various Allowances.") - - -	104 - -		
petty Officer in charge of the Tank Vessel at Simon's Bay, borne in Her Majesty's Ship "Seringapatam" - - - - -	1	Lodging Money - - - - -	12 - -		
Workers employed on shore at the Portland Coal Depot, borne in Her Majesty's Ship "St. George" - - - - -	4	{ Ditto to each, at the rate of 6 d. a day, or 9 l. 2 s. 6 d. a year - - - - - }	36 10 -	1,384 12 6	
VARIOUS ALLOWANCES:					
Officers employed on board Her Majesty's Ships as Interpreters - - - - -	-	{ Allowance to each, in addition to his Pay, of 1 s. 6 d. a day, or 27 l. 7 s. 6 d. a year - - - - - }	100 - -		
Ward-room Officers of certain Ships, for messing Gun-room Officers, who have no distinct Mess on board of their own - - - - -	-	{ Difference between the Subscriptions paid by Gun-room Officers, and Ward-room Officers, to their respective Messes - - - - - }	3,600 - -		
Captain of Her Majesty's Ship "Wolverine," employed on special service on the Lakes of Canada - - - - -	1	Extra Pay, at the rate of 7 s. a day (See also "Lodging Money.") - - - - -	127 15 -		
Staff Commander of Her Majesty's Ship "Pigmy" - - - - -	1	{ Allowance, in addition to his Pay, for charge of Victualling Stores, there being no Assistant Paymaster in charge - - - - - }	75 - -		
Staff Commander of Her Majesty's Yacht "Victoria and Albert" - - - - -	1	{ Allowance, in addition to his Pay, for charge of the State Furniture on board the Royal Yacht - - - }	50 - -		
Ward-room Steward of ditto - - - - -	1	{ Allowance, in addition to his Pay, for charge and proper keeping of Government Plate - - - - - }	10 - -		
		Carried forward - - - £.	3,962 15 -	9,094 4 4	

APPENDIX, No. 2.—EXPLANATORY STATEMENT (A. 2)—*continued.*

RANK.	Num- ber.	DESCRIPTION OF PAY, &c.	ANNUAL AMOUNT.	TOTAL AMOUNT.	TOTAL AMOUNT of the Whole.
SPECIAL PAY AND ALLOWANCES— <i>continued.</i>			£. s. d.	£. s. d.	£. s. d.
		Brought forward - - -	3,962 15 -	9,094 4 4	
Various Allowances— <i>continued.</i>					
Navigating Sub-Lieutenants in Her Majesty's Gunboats - - - - }	33	{ Allowance to each, in addition to his Pay, of 60 l. a year, for charge of Paymasters' and Warrant Officers' Stores and Accounts, there being no Officer of either of those Ranks borne in Gunboats - - }	1,980 - -		
Deputy Inspector-General of Hospitals and Fleets, borne in Her Majesty's Ship "Fisgard" - - - - }	1	Allowance in lieu of a Servant - - - - -	18 6 -		
Staff Surgeon-Superintendent in a Convict Ship, not being a Commissioned Ship - }	1	Pay at the rate of 24s. a day - - - - -	438 - -		
Writer, borne in Her Majesty's Ship "Indus" - - - - }	1	Pay at the rate of 4s. a day, or 73 l. a year - - -	73 - -		
Ditto - borne in Her Majesty's Ship "Egmont" - - - - }	1	Pay at the rate of 4s. 6d. a day, or 82 l. 2s. 6d. a year	82 2 6		
Lithographer employed in the Office of the Commander in Chief at Portsmouth, borne in Her Majesty's Ship "Victory" - - - - }	1	Pay at the rate of 1 l. 1s. a week - - - - -	54 12 -		
Ship's Corporal of Her Majesty's Ship "Impregnable" - - - - }	1	{ Allowance, in addition to his Pay, of 6d. a day, or 9 l. 2s. 6d. a year, for instructing the Band Boys in Music - - - - - }	9 2 6		
Qualified Pilots for Channel Islands, borne in Her Majesty's Ship "Dasher" - }	14	{ At Rates of Pay, according to their Classes, viz.: 1st Class, 3, at 5s. a day, or 91 l. 5s. a year; 2nd Class, 3, at 4s. 6d. a day, or 82 l. 2s. 6d. a year; 3rd Class, 3, at 4s. a day, or 73 l. a year; also, allowances to the following qualified men as Pilots, in addition to the Pay of their Ratings, viz.: 1st Class, 1, at 1s. 6d. a day, or 27 l. 7s. 6d. a year; 2nd Class, 1, at 1s. a day, or 18 l. 5s. a year; 3rd Class, 3, at 6d. a day, or 9 l. 2s. 6d. a year - }	812 2 6		
Riggers, borne on the Books of Portsmouth Dockyard - - - - }	-	{ Proportion of their Pay, for the time they are employed Afloat, as additions to the Complements of the Royal Yachts - - - - - }	2,700 - -		
HER MAJESTY'S COAST GUARD SERVICE:				10,130 - 6	
Senior Mates in command of Tenders (Cruisers) to Coast Guard ships - }	21	{ Allowance to each, in addition to his Sea Pay, to make up the Amount he was in receipt of prior to the transfer of the Coast Guard to the Admiralty, viz., 1s. 6d. a day, or 27 l. 7s. 6d. a year - }	574 17 6		
Senior Mates of Tenders (Cruisers) as above, not in command - - - }	5	{ Allowance to each, in addition to his Sea Pay, as above, viz., 6d. a day, or 9 l. 2s. 6d. a year - }	45 12 6		
Second Mates of Tenders (Cruisers) as above, not in command - - - }	16	{ Allowance to each, in addition to his Sea Pay, as above, viz., 1s. a day, or 18 l. 5s. a year - - }	292 - -		
Chief Quartermasters in command - - }	2	{ Allowance to each, in addition to his Pay, as above, viz., 1s. 1d. a day, or 19 l. 15s. 5d. a year - }	39 10 10		
Inspecting Lieutenants, and Lieutenants commanding Coast Guard Stations on Shore - - - - }	4	{ Allowance to each, in addition to his Pay, as above, viz., 1s. a day, or 18 l. 5s. a year - - - }	73 - -		
Navigating Lieutenants commanding ditto	3	{ Allowance to each, in addition to his Pay, as above, viz., 1s. a day, or 18 l. 5s. a year - - - }	54 15 -		
				1,079 15 10	
TOTAL SPECIAL PAY AND ALLOWANCES (INCLUDING 1,079 l. 15s. 10d., FOR COAST GUARD SERVICE), AS PROVIDED FOR IN THE BODY OF THE ESTIMATE, p. 8 - - - - }				£.	20,304 - 8

APPENDIX, No. 3.

A RETURN showing the Number of Officers, Men and Boys, MORE or LESS, Borne than Voted during the present Financial Year.

FOR HER MAJESTY'S FLEET (exclusive of Indian Troop Ships) :

MONTH.	NUMBER VOTED.	NUMBER BORNE.							Number More or Less Borne than Voted.		
		Officers and Seamen.	Boys (including those for Training).	TOTAL.	Marines (including those Serving in the Coast Guard and Indian Troop Ships).			Total of all Classes.	More.	Less.	
					Afloat.	On Shore.	TOTAL.				
1867 :											
April - -	Seamen - - 37,015 } Boys - - 7,418 } (Including 3,100 for training). Marines { Afloat - 8,000 } { On Shore, 8,400 } 16,400	36,927	7,034	43,961	8,768	7,505	16,273	60,234	-	599	
May - -		37,215	7,018	44,233	8,292	7,995	16,287	60,520	-	313	
June - -		36,747	6,858	43,605	7,513	8,978	16,491	60,096	-	737	
July - -		36,710	7,176	43,886	7,450	9,041	16,491	60,377	-	456	
August -		36,712	7,141	43,853	7,188	9,285	16,473	60,326	-	507	
September -		36,526	7,108	43,634	7,207	9,220	16,427	60,061	-	772	
October -		36,798	7,055	43,853	7,276	9,028	16,304	60,157	-	676	
November -		60,833	37,023	7,281	44,304	7,509	8,774	16,283	60,587	-	246
December -			36,480	7,209	43,689	7,513	8,754	16,267	59,956	-	877
1868 :											
January -		- - - - -	36,502	7,403	43,905	8,069	8,202	16,271	60,176	-	657

FOR HER MAJESTY'S COAST GUARD :

PERSONS Borne on SHIPS' BOOKS for Service Afloat and On Shore :

MONTH.	NUMBER VOTED.	NUMBER BORNE.					Number More or Less Borne than Voted.	
		Afloat.			On Shore.	Total Afloat and On Shore.	More.	Less.
		Officers and Men.	Boys.	TOTAL.	Officers and Men.			
1867 :								
April - -	Afloat - { Seamen - 2,610 } { Boys - 340 } 2,950	2,521	233	2,754	4,318	7,072	-	178
May - -		2,495	222	2,717	4,345	7,062	-	188
June - -		2,587	233	2,820	4,361	7,181	-	69
July - -		2,590	265	2,855	4,361	7,216	-	34
August -	On Shore - Officers and Men - 4,300 7,250	2,606	262	2,868	4,347	7,215	-	35
September -		2,614	282	2,896	4,372	7,268	18	-
October -		2,623	284	2,907	4,386	7,293	43	-
November -		2,756	258	3,014	4,384	7,398	148	-
December -		2,797	305	3,102	4,390	7,492	242	-
1868 :								
January -	- - - - -	2,812	313	3,125	4,431	7,556	306	-

CADETS.—Number of NAVAL CADETS, admitted into the Royal Navy in the Year ended 31st December 1867 - - 136

APPENDIX, No. 4.

A COMPARATIVE STATEMENT showing the Number of Ships and Vessels in Commission on 1st December 1866 and on 1st December 1867 (exclusive of Indian Troop Ships).

RATES, &c.	1 December 1866.			1 December 1867.			1867.	
	Sailing.	Steam.	TOTAL.	Sailing.	Steam.	TOTAL.	More.	Less.
SEA-GOING :								
Line of Battle Ships - - - - -	-	4	152	-	1	150	-	3
Armour-plated Ships - - - - -	-	16		-	19		3	-
Frigates and Corvettes - - - - -	-	34		-	31		-	3
Sloops and small Vessels - - - - -	-	98		-	99		1	-
TOTAL EFFECTIVE, for GENERAL SERVICE -	-	152	152	-	150	150	4	6
							2 less.	
Gunnery and Training Ships - - - - -	8	-	59	8	-	58	-	-
Stationary, Receiving, and Depot Ships (including Royal Yachts) - - - - -	21	6		20	6		-	1
Surveying Vessels - - - - -	-	4		-	4		-	-
Troop Ships - - - - -	-	5		-	6		1	-
Store Ships - - - - -	-	7	-	-	6	-	-	1
Drill Ships (Royal Naval Reserve) - - - - -	8	-		8	-		-	-
Tenders - - - - -	10	35	45	9	33	42	-	3
TOTAL FLEET, including TENDERS - - -	47	209	256	45	205	250	5	11
							6 less.	
Guard Ships of the Coast Guard - - - - -	-	10	69	-	11	70	1	-
Tenders, including Cruisers - - - - -	41	18		41	18		-	-
TOTAL FLEET and COAST GUARD, including TENDERS - - - - -	88	237	325	86	234	320	6	11
							NET TOTAL } 5 less.	

APPENDIX, No. 5.

EXPLANATORY STATEMENT (B.) of the EXPENSE of 14,700 ROYAL MARINES, as provided for in the NAVY ESTIMATES, for 1868-69, page 9.

RANK.	Number.	PAY OF EACH RANK.			Total Numbers.	TOTAL AMOUNT.
		Daily.	Annual.	For the Whole.		
		£. s. d.	£. s. d.	£. s. d.		£. s. d.
GENERAL STAFF:						
General Officers of Marines, Colonels of Divisions (5)	-	-	900 - -	4,500 - -		
Inspector General of Royal Marines (in addition to his Unattached Pay as Major-General of Royal Marines)	-	1 17 11	691 19 7	691 19 7		
Captain, Royal Marines, attached to the above for Military Duties and Correspondence (in addition to his Pay as Captain)	-	- 9 6	173 7 6	173 7 6		
Deputy Adjutant-General	1	2 12 5	956 12 1	956 12 1		
Assistant Adjutant-General	1	1 11 8	577 18 4	577 18 4		
REGIMENTAL STAFF (ARTILLERY):						
Colonel Commandant	1	2 - -	730 - -	730 - -		
Colonel, Second Commandant	1	1 6 3	479 1 3	479 1 3		
Lieutenant-Colonels	4	- 17 11	326 19 7	1,307 10 -		
Paymaster - Voted under "Marine Divisions," Vote 9.	1	-	-	-		
Barrack Master - Voted under "Marine Infirmaries," Vote 8.	1	-	-	-		
Surgeon - Voted under "Marine Infirmaries," Vote 8.	1	-	-	-		
Assistant Surgeons	2	-	-	-		
Captains, Gunnery Instructors	3	- 12 1	220 10 5	661 11 3		
Ditto Musketry - ditto	1	- 12 1	220 10 5	220 10 5		
Staff Captain	1	- 12 1	220 10 5	220 10 5		
Second Captains and Adjutants	2	- 11 -	200 15 -	401 10 -		
Quartermaster	1	- 9 4	170 6 8	170 6 8		
Ditto	2	- 7 10	142 19 2	285 18 4		
Superintending Schoolmaster	1	- 7 -	127 15 -	127 15 -		
Schoolmasters	3	- 3 6	63 17 6	191 12 6		
First Drill Serjeant	1	- 3 1	56 5 5	56 5 5		
Provost Serjeant	1	- 3 9	68 8 9	68 8 9		
Serjeant-Majors	2	- 4 6½	82 10 1½	165 - 2		
Quartermaster Serjeants	3	- 4 -	73 7 7½	220 2 9		
Barrack Serjeant	1	- 3 1	56 5 5	56 5 5		
Adjutant's First Clerk	1	- 3 1	56 5 5	56 5 5		
Paymaster's, ditto	1	- 3 1	56 5 5	56 5 5		
Hospital Serjeant	1	- 3 1	56 5 5	56 5 5		
Gunnery Instructors	3	- 3 1	56 5 5	168 16 3		
Musketry Serjeant Instructor	1	- 3 1	56 5 5	56 5 5		
Armourer Serjeant	1	- 5 3	95 16 3	95 16 3		
Master Tailor	1	- 3 1	56 5 5	56 5 5		
Bandmaster	1	- 3 1	56 5 5	56 5 5		
Drum Major	1	- 3 1	56 5 5	56 5 5		
Bugle ditto	1	- 3 1	56 5 5	56 5 5		
Serjeant, Officers' Mess	1	- 3 1	56 5 5	56 5 5		
Pay Serjeant	1	- 3 -	54 15 -	54 15 -		
Ditto	7	- 3 1	56 5 5	393 17 11		
					56	13,481 -
REGIMENTAL STAFF, LIGHT INFANTRY:						
Colonels Commandant	4	1 18 6	702 12 6	2,810 10 -		
Colonels, Second Commandant	4	1 - -	365 - -	1,460 - -		
Colonels, Aides-de-Camp to Her Majesty (2), Additional Pay	-	- 10 -	182 10 -	365 - -		
Lieutenant Colonels	16	- 17 -	310 5 -	4,964 - -		
Paymasters - Voted under "Marine Divisions," Vote 9.	4	-	-	-		
Barrack Masters - Voted under "Marine Infirmaries," Vote 8.	4	-	-	-		
Surgeons - Voted under "Marine Infirmaries," Vote 8.	4	-	-	-		
Assistant Surgeons	8	-	-	-		
Captain, Brevet Lt. Col., Gunnery Instructor	1	- 16 -	292 - -	292 - -		
Ditto - ditto	3	- 11 7	211 7 11	634 3 9		
Bitto, Brevet Major, Musketry Instructors	3	- 13 7	247 17 11	743 13 9		
Ditto - ditto	1	- 11 7	211 7 11	211 7 11		
Second Captains and Adjutants	4	- 10 6	191 12 6	766 10 -		
Lieutenants and - ditto	4	- 6 6	118 12 6	474 10 -		
Lieutenants, Assistant Musketry Instructors	4	- 6 6	118 12 6	474 10 -		
Quartermasters	2	- 10 6	191 12 6	383 5 -		
Ditto	1	- 7 6	136 17 6	136 17 6		
Ditto	1	- 10 -	182 10 -	182 10 -		
Ditto	1	- 8 6	155 2 6	155 2 6		
Ditto	3	- 6 6	118 12 6	355 17 6		
Carried forward		72	- -	14,409 17 11	56	13,481 - -

APPENDIX, No. 5.—EXPLANATORY STATEMENT (B.)—continued.

R A N K.	Number.	PAY OF EACH RANK.			Total Numbers.	TOTAL AMOUNT.
		Daily.	Annual.	For the Whole.		
		£. s. d.	£. s. d.	£. s. d.		£. s. d.
Brought forward - - -	72	- - -	- - -	14,409 17 11	56	13,481 - -
REGIMENTAL STAFF, LIGHT INFANTRY—continued.						
Serjeant-Majors - - - - -	8	- 3 7	65 7 11	523 3 4		
Quartermaster-Serjeants - - - - -	8	- 2 11	53 4 7	425 16 8		
Barrack Serjeants - - - - -	4	- 2 3	41 1 5	164 5 8		
Schoolmasters - - - - -	3	- 4 -	73 - -	219 - -		
Ditto - - - - -	1	- 4 6	82 2 6	82 2 6		
Ditto - - - - -	3	- 3 6	63 17 6	191 12 6		
Ditto - - - - -	1	- 3 -	54 15 -	54 15 -		
Adjutant's First Clerks - - - - -	3	- 2 3	41 1 3	123 3 9		
Ditto - - ditto - - - - -	1	- 2 2	39 10 10	39 10 10		
Paymaster's First Clerks - - - - -	4	- 2 3	41 1 3	164 5 -		
Company Pay Serjeants - - - - -	14	- 2 2	39 10 10	553 11 8		
Ditto - - ditto - - - - -	18	- 2 3	41 1 3	739 6 -		
Hospital Serjeants - - - - -	4	- 2 3	41 1 3	164 5 -		
Provost Serjeants - - - - -	3	- 2 11	53 4 7	159 13 9		
Ditto - ditto - - - - -	1	- 2 10	51 14 2	51 14 2		
First Drill Serjeants - - - - -	2	- 2 9	50 3 9	100 7 6		
Ditto - ditto - - - - -	1	- 2 2	39 10 10	39 10 10		
Ditto - ditto - - - - -	1	- 2 8	48 13 4	48 13 4		
Gunnery Serjeant Instructors - - - - -	3	- 2 3	41 1 3	123 3 9		
Ditto - - - ditto - - - - -	1	- 2 2	39 10 10	39 10 10		
Musketry Serjeant Instructors - - - - -	3	- 2 3	41 1 3	123 3 9		
Ditto - - - ditto - - - - -	1	- 2 2	39 10 10	39 10 10		
Armourer Serjeants - - - - -	2	- 5 3	95 16 3	191 12 6		
Ditto - ditto - - - - -	2	- 5 2	94 5 10	188 11 8		
Master Tailors - - - - -	2	- 2 2	39 10 10	79 1 8		
Ditto - - - - -	2	- 2 3	41 1 3	82 2 6		
Band Masters - - - - -	3	- 2 2	39 10 10	118 12 6		
Ditto - - - - -	1	- 2 3	41 1 3	41 1 3		
Drum-Majors - - - - -	4	- 2 3	41 1 3	164 5 -		
Bugle-Majors - - - - -	3	- 2 3	41 1 3	123 3 9		
Ditto - - - - -	1	- 2 2	39 10 10	39 10 10		
Serjeants, Officers' Messes - - - - -	3	- 2 2	39 10 10	118 12 6		
Ditto - - - ditto - - - - -	1	- 2 3	41 1 3	41 1 3		
Messenger in Deputy Adjutant-General's Office - - - - -	-	- - -	- - -	75 - -		
Necessary Woman - - - - -	-	- - -	- - -	40 - -		
				184	19,883 - -	
				240	33,364 - -	
ARTILLERY:						
COMMISSIONED OFFICERS:						
Captains {having higher rank as Brevet Majors - - - - -	6	- 14 1	257 - 5	1,542 2 6		
{not having ditto - - - ditto - - - - -	12	- 12 1	220 10 5	2,646 5 -		
Second Captains - - - - -	18	- 11 -	200 15 -	3,613 10 -		
Lieutenants {above Seven Years' Service - - - - -	6	- 7 10	142 19 2	857 15 -		
{under - - - ditto - - - - -	39	- 6 10	124 14 2	4,863 6 3		
Lieutenants - - - - -	9	- 5 7	101 17 11	917 1 3		
				90	14,440 - -	
NON-COMMISSIONED OFFICERS AND GUNNERS:						
Colour-Serjeants - - - - -	18	- 3 7	65 7 11	1,177 2 6		
Serjeants - - - - -	81	- 3 1	56 5 5	4,557 18 9		
Ditto - - - - -	63	- 3 -	54 15 -	3,449 5 -		
Corporals - - - - -	74	- 2 5	44 2 1	3,263 14 2		
Ditto - - - - -	52	- 2 4	42 11 8	2,214 6 8		
Bombardiers - - - - -	93	- 2 2	39 10 10	3,677 7 6		
Ditto - - - - -	33	- 2 3	41 1 3	1,355 1 3		
Gunners - - - - -	556	- 1 6½	27 15 1½	15,431 17 11		
Ditto - - - - -	1,874	- 1 5½	26 4 8½	49,163 4 5		
Buglers - - - - -	2	- 1 6½	27 15 1½	55 10 2		
Ditto - - - - -	87	- 1 5½	26 4 8½	2,282 7 10		
Ditto - - - - -	1	- 1 3½	23 3 10½	23 3 10		
				2,934	86,651 - -	
				3,264	134,455 - -	
LIGHT INFANTRY:						
COMMISSIONED OFFICERS:						
Captains {having higher rank as Brevet Majors - - - - -	1	- 16 -	292 - -	292 - -		
{ditto - - - - - ditto - - - - -	7	- 13 7	247 17 11	1,735 5 5		
{not having ditto - - - ditto - - - - -	92	- 11 7	211 7 11	19,448 8 4		
Second Captains - - - - -	46	- 10 6	191 12 6	8,814 15 -		
Lieutenants {above Seven Years' Service - - - - -	28	- 7 6	136 17 6	3,832 10 -		
{under - - - ditto - - - - -	122	- 6 6	118 12 6	14,472 - -		
Lieutenants - - - - -	50	- 5 3	95 16 3	4,790 1 3		
				346	53,385 - -	
Carried forward - - - - -	-	- - -	- - -	- - -	3,610	187,840 - -

APPENDIX, No. 5.—EXPLANATORY STATEMENT (B).—continued.

RANK.	Number.	PAY OF EACH RANK.			Total Numbers.	TOTAL AMOUNT.
		Daily.	Annual.	For the Whole.		
		£. s. d.	£. s. d.	£. s. d.		
Brought forward - - -	- - -	- - -	- - -	- - -	3,610	187,840 - -
NON-COMMISSIONED OFFICERS AND PRIVATES:						
Colour Serjeants - - - - -	94	- 2 9	50 3 9	4,717 12 6		
Ditto - - - - -	6	- 2 8	48 13 4	292 - -		
Serjeants - - - - -	354	- 2 3	41 1 3	14,536 2 6		
Ditto - - - - -	46	- 2 2	39 10 10	1,818 - -		
Corporals - - - - -	229	- 1 7	28 17 11	6,617 2 11		
Ditto - - - - -	371	- 1 6	27 7 6	10,156 - -		
Privates - - - - -	11	- 1 5	25 17 1	284 7 11		
Ditto - - - - -	1,915	- 1 3	22 16 3	43,685 18 9		
Ditto - - - - -	7,664	- 1 2	21 5 10	163,181 10 6		
Drummers - - - - -	32	- 1 4½	25 9 5½	815 3 4		
Ditto - - - - -	12	- 1 4	24 6 8	292 - -		
Ditto - - - - -	77	- 1 3½	23 19 -¾	1,844 7 10		
Ditto - - - - -	279	- 1 3	22 16 3	6,364 13 9		
					11,090	254,605 - -
Add additional 1 d. per day for 2,000 Men re-engaging after Eight Years' Service - }	viz., for Service Afloat - - - - - - Ditto - Ashore - - - - -	- - - - - - - - - -	- - - - - - - - - -	1,500 - - } 1,500 - - }	14,700 -	442,445 - - 3,000 - -
	8,000 Afloat { Commissioned Officers and Men - - - - -	- - - - -	- - - - -	212,145 - - }	14,700	445,445 - -
	6,700 Ashore { Commissioned and Staff Officers - - - - -	- - - - -	- - - - -	80,971 - - }		
	{ Non-commissioned and Privates - - - - -	- - - - -	- - - - -	152,329 - - }		
Beer Money for 6,941 Men on Shore - - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- -	10,555 - -
Excess Cost of Bread and Meat, beyond the 4½ d. a day charged as the fixed Price for the Com- pound Ration - - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- -	12,188 - -
Good Conduct Pay for 6,510 Men - - - - -	- - - - -	- - - - -	{ On Service Afloat, £8,338 On Service on Shore, £8,112 }	- - - - -	- -	16,450 - -
Colonial or Double Personal Pay of Marines in San Juan - - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- -	4,000 - -
MARINE CONTINGENT EXPENSES AND ALLOWANCES; viz.:						
Allowances to Pay-Captains; to Marines acting as Divisional Clerks and Savings Banks' Clerks; Allowances in aid of Divisional Mess, Forage Money; Non-effective and Contingent Allowances to the Officers of the Marine Artillery having the Command of Companies; Petty Allowances to Officers of Marines; Lodging-Money, March- ing Money, Billet Money, &c. &c. - - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- -	22,000 - -
PRIZES FOR GOOD SHOOTING AT THE FIVE DIVISIONS:						
Marksmen - { 5 First Prizes - - - - -	- - - - -	- - - - -	- - - - -	22 16 3		
{ 50 Second ditto - - - - -	- - - - -	- - - - -	- - - - -	152 1 8		
{ 650 Third ditto - - - - -	- - - - -	- - - - -	- - - - -	988 2 1		
					- -	1,163 - -
RECRUITING EXPENSES:						
Expenses (exclusive of Levy Money) on account of Recruits to be raised at Recruiting Stations - - - - -	- - - - -	- - - - -	- - - - -	168 - -		
Levy Money for 298 Recruits, at £. 3. 6 s. each - - - - -	- - - - -	- - - - -	- - - - -	785 - -		
RECRUITS ENLISTED AT HEAD QUARTERS:						
Privates - { Ordinary - 200 Recruits, at £. 2. 9 s. 6 d. each. - - - - -	- - - - -	- - - - -	- - - - -	495 - -		
{ Militia - - - - -	- - - - -	- - - - -	- - - - -	- - - - -		
				£. 1,448 - -		
ADDITIONAL RECRUITING EXPENSES:						
Bounty for 2,000 Marines re-engaging after Eight Years' Service, at £. 3 per Man - - -	- - - - -	- - - - -	- - - - -	6,000 - -		
Free Kit for 2,000 Marines, - ditto - - ditto - at £. 4 " - - -	- - - - -	- - - - -	- - - - -	8,000 - -		
					- -	15,448 - -
					TOTAL - - £.	14,700 527,249 - -

APPENDIX, No. 6.

A. RETURN, giving the ITEMS of EXPENDITURE in the Year 1866-67 (the last Financial Year closed), on account of MARINE CONTINGENCIES and ALLOWANCES.

	£.	s.	d.
Allowances to Pay Captains - - - - -	676	-	-
Ditto to Marines acting as Divisional Clerks - - - - -	2,449	13	6
Forage Money - - - - -	2,224	4	2
Non-effective and Contingent Allowances to Officers of Artillery having the command of Companies, and Petty Allowances to Officers of Marines - }	876	-	-
Billet and Lodging Money, Marching Money, Conduct Money, and Family Allowances - - - - - }	7,460	-	-
Allowances to Quartermasters, Adjutants, and Acting Ditto - - - - -	817	5	-
Allowances in Aid of Divisional Mess - - - - -	2,175	-	-
Contingent Allowances to Officers and Men; per-centage to Divisional Paymasters on their Disbursements; Allowance for House-rent to the Staff of the Royal Marine Office, and Sundry Contingent Expenses - - - - - }	5,862	7	-
TOTAL EXPENDITURE for the Year 1866-67 - - - £.	22,540	9	8

APPENDIX, No. 7.

STATEMENT of the whole Charge on Account of the CORPS of ROYAL MARINES, included under the several VOTES of the ESTIMATES.

	Under Vote.	
	No.	£.
For the Wages, &c., of the Marines - - - - -	1	527,249
For Victuals and Clothing of the Marines - - - - -	2	225,345
For Salaries, Contingent Expenses, and Wages of Matrons, Nurses, &c., and of the Metropolitan Police Force at the several Marine Infirmaries - - - - - }	8	13,162
For Salaries and Contingent Expenses of the Establishments at the several Marine Divisions - - - - - }	9	20,709
For new Works, and Repairs of Buildings at the Marine Divisions and Infirmaries - - - - - }	11	25,100
For Medical Attendance, Medicines, &c. - - - - -	12	12,000
For Half-Pay of Marine Officers - - - - -	15	52,531
For Pensions, viz.: £.		
To Marine Officers for Good and Meritorious Services -	600	
To Marines for Conspicuous Bravery - - - - -	20	
To Commissioned and Non-Commissioned Officers for Wounds - - - - -	1,261	
To Widows and Relatives of Marine Officers Slain, &c. -	285	
To Widows of Marine Officers - - - - -	11,306	
Naval Pensions and Gratuities to Marines - - - - -	101,633	
	16	115,195
To a Schoolmistress, Royal Marine Division, Forton - - - - -	(Sec. 1.) 16	18
	(Sec. 2.)	
TOTAL - - - £.		991,309

APPENDIX, No. 8.

STATEMENT showing the APPROPRIATION of the MESSENGERS, &c., in the DEPARTMENTS of the PRINCIPAL OFFICERS, &c.

DEPARTMENT, &c.	NUMBER.							Number of Persons attended upon.	Number of Rooms and Repositories attended.
	MESSENGERS					Labourers and Temporary Labourers.	TOTAL.		
	On Salary.			Fixed Salary, and Day Pay.	Boys.				
	1st Class.	2nd Class.	3rd Class.						
Controller of the Navy - -	1	1	2	1	1	1	7	62	30
Accountant General - - -	1	5	13	3	2	2	26*	197	92
Storekeeper General - - -	-	1	1	-	1	-	3	31	30
Comptroller of Victuallings - -	1	2	5	-	-	1	9	60	34
Medical Director General - -	1	-	2	-	-	-	3	17	18
Director of Transports - - -	-	1	2	-	1	-	4	26	12
Director of Works - - -	-	1	1	-	-	-	2	20	9
Registrar of Contracts - - -	-	-	1	-	-	-	1	11	7
Director of Education for the Admiralty - - - - -	(Attended by a Messenger of the Accountant General's Department)							1	2
	4	11	27	4	5	4	55	425	234
Head Messenger - - - - -	-	-	-	On Fixed Salary. 1	-	-	14	—	—
Keeper of Printed Forms, and Assistants (Storekeeper General's Department) - - -	1	1	-	-	-	1			
Out-door Messengers - - -	-	-	-	3	1	-			
Boy to attend Telegraph - - -	-	-	-	-	1	-			
Porter - - - - -	-	1	-	-	-	-			
Assistant Porter - - - - -	-	1	-	-	-	-			
Postman - - - - -	1	-	-	-	-	-			
Lamplighter - - - - -	-	-	1	-	-	-			
Deptford and Woolwich, Messenger - - - - -	-	-	-	On Fixed Salary. 1	-	-			
TOTAL NUMBER - - -	6	14	28	9	7	5	69	—	—

* Several employed tracing Muster Books.

APPENDIX, No. 9.

STATEMENT of the EXPENDITURE in the Year 1866-67 (the last Financial Year closed),
for REWARDS, EXPERIMENTS, &c., for SCIENTIFIC PURPOSES.

	£.	s.	d.
Expenses of reduction of Dr. Bradley's Greenwich Observations	146	—	—
Payment to Messrs. Elliott Brothers, for Mathematical, &c. Instruments	31	1	—
Payments to Computers engaged in Magnetic reductions	99	17	—
Remuneration to Staff Commander J. Burdwood for preparation of Tables of Sun's true bearing for the Parallel from 48° to 30°	140	—	—
Payment to Messrs. Strangeways & Walden for printing papers by Sir T. Maclear of Observations at Cape of Good Hope	24	—	—
Gratuity to Staff Commander R. Hoskyn for compilation of "Sailing Directions for the Coast of Ireland"	65	—	—
Payment of Staff Commander J. Burdwood, for compilation of Azimuth Tables	31	—	—
Allowance to Optician for managing the Time Ball at Mount Wise, Devonport	25	—	—
Gratuity to Master of "Orontes" for making Magnetic Experiments	22	16	13
Purchase of articles for Her Majesty's ship "Nassau," for preserving specimens of Natural History	6	13	7
	£.	591	7 10

APPENDIX, No. 10.

STATEMENT of the RATES of SURVEYING PAY and LODGING MONEY of SURVEYING OFFICERS,
provided for in the Estimates of 1868-69.

RANK.	Surveying Pay (Daily Rate).		Lodging Money (Daily Rate).	
	At Home.	Abroad.	At Home.	Abroad.
In Charge of Surveys:	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Captains - - -	— - -	1 - -	— 4 6	—
Commanders - - -	— - -	1 - -	—	—
Staff Commanders - -	— 13 6	1 - -	— 4 6	4s. 6d. to 7s.
Navigating Lieutenants -	— - -	— 15 -	— 3 6	3s. 6d. to 6s.
Assistant Surveyors:				
Lieutenants - - -	— - -	2s. 6d. to 4s.	—	—
Staff Commanders - -	— 7 -	— 8 -	— 4 6	— 4 6
Navigating Lieutenants	— 5 -	2s. 6d. to 8s.	— 3 6	3s. 6d. to 6s.
Paymasters - - -	— 7 -	— 4 -	— 4 6	—
Sub-Lieutenants - -	— - -	— 2 6	—	—
Navigating Sub-Lieutenants	— 5 -	2s. 6d. to 6s. 3	— 2 6	—
Midshipmen - - -	— - -	— 2 6	—	—
Navigating Midshipmen -	— - -	2s. 6d. to 4s.	—	—

APPENDIX, No. 11.

Note.—SHOWING THE SURVEYS IN PROGRESS.

HOME.	FOREIGN.	
Coasts of England.	Mediterranean.	Cape of Good Hope.
Portsmouth.	Strait of Mugellan.	Victoria.
Channel Islands.	North China and Japan.	New South Wales. } Australia.
	China Sea Shoals.	Queensland.
	West Indies.	South Australia.
	Newfoundland.	Sounding for Sub-marine Cables.
	British Columbia.	

APPENDIX, No. 12.

STATEMENT of the NUMBER of STEAM SHIPS AFLOAT and BUILDING, and of the NUMBER of EFFECTIVE SAILING SHIPS, on 1st February 1868.

CLASSES OF SHIPS.	STEAM.			Effective Sailing Ships Afloat.	TOTAL Steam and Sailing.
	Afloat.	Building.	TOTAL.		
	No.	No.	No.	No.	No.
Armour-plated Ships, Iron, 3rd rates - - - Screw	9	4	13	-	13
Ditto - - - Wood, 3rd rates - - - "	7	-	7	-	7
Ditto - - - Iron, 4th rates - - - "	2	-	2	-	2
Ditto - - - Wood, 4th rates - - - "	1	1	2	-	2
Ditto - Turret Ships, Iron, 4th rates - - - "	1	2	3	-	3
Ditto - ditto - Wood, 4th rates - - - "	1	-	1	-	1
Ditto - ditto - Iron, 6th rates - - - "	2	-	2	-	2
Ditto - Corvettes, Iron, 6th rates - - - "	1	-	1	-	1
Ditto - ditto - Wood, 6th rates - - - "	2	-	2	-	2
Ditto - Sloops, Wood - - - - - "	2	-	2	-	2
Ditto - Gun Boats, Iron, and Iron and Wood - - - "	2	-	2	-	2
Ditto - ditto - ditto - - - Hydraulic	1	-	1	-	1
Ditto - Floating Batteries, Iron - - - Screw	3	-	3	-	3
Ditto - ditto - Wood - - - - - "	1	-	1	-	1
Ships of the Line - - - - - "	46	* 2	48	1	49
Frigates - - - - - "	31	1	32	5	37
Ditto - - - - - Paddle	3	-	3	-	3
Block Ships - - - - - Screw	2	-	2	-	2
Corvettes - - - - - "	23	3	26	-	26
Sloops - - - - - "	35	4	39	1	40
Ditto - - - - - Paddle	8	-	8	-	8
Small Vessels - - - - - "	10	-	10	-	10
Despatch Vessels - - - - - "	4	-	4	-	4
Gun Vessels - - - - - Screw	43	15	58	-	58
Gun Boats - - - - - "	86	-	86	-	86
Tenders, Tugs, &c. - - - - - "	9	-	9	-	9
Ditto - - - - - Paddle	42	2	44	-	44
Mortar Ships - - - - - Screw	2	-	2	-	2
Troop and Store Ships - - - - - "	13	-	13	-	13
Ditto - - - - - Paddle	1	-	1	-	1
Transports for India Reliefs - - - - - Screw	5	-	5	-	5
Yachts - - - - - Paddle	5	-	5	-	5
Mortar Floats - - - - - Sailing	-	-	-	22	22
TOTAL SCREW - - - - -	330	32	362	-	-
TOTAL PADDLE - - - - -	73	2	75	-	-
GRAND TOTAL - - - - -	403	34	437	29	466

The "Cerberus" turret-ship, building for the Colony of Victoria, is not included in the above numbers.

* The building of 2 line-of-battle ships is suspended.

APPENDIX, No. 13.

PROGRAMME of SHIPBUILDING WORKS to be undertaken in HER MAJESTY'S
DOCKYARDS during the Year 1868-69.GENERAL SUMMARY, showing the Appropriation of Shipwrights proposed for the
Year 1868-69.

For Ships Building, and for completing new Ships Afloat, for Sea	}	1,800
Service - - - - -		
For Repairs and Refits to Sea-going and all other Ships, Casualties,	}	2,621
Yard Craft, Harbour and Dockyard Services, &c. &c., and for		
Maintenance of Ships in Reserve - - - - -		
TOTAL Strength - - - - -		4,421

Note.—The Abstract that follows refers only to the number of Shipwrights to be employed, the number of other Artificers being in proportion to the Shipwrights. The Scheme of Works must be considered as indicating only the probable employment of the Artificers of the Dockyards. The casual work is extremely uncertain, but provision has been made for meeting it as far as can be foreseen. It is not possible to say exactly what repairs and refits will be undertaken during the financial year, so much depends upon the state in which the vessels are found to be when examined in dock; and therefore the list of ships to be refitted must be taken as one which it will not be practicable to follow without considerable variation. It is most probable that many of the vessels included in the list will not be found worth repair, and may therefore be sold or broken up.

Controller's Office, }
13 February 1868. }

Robert Spencer Robinson.

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

LIST of SHIPS BUILDING and COMPLETING for SEA, provided for in the PROGRAMME of DOCKYARD WORKS for 1868-69.

NOT YET LAUNCHED.

IRON-CLAD FRIGATES:

- "Repulse," to launch and complete for sea - Woolwich.
 "New Hercules," to be advanced to $\frac{2\frac{1}{4}}{8}$ ths - Chatham.
 "Iron Duke," to be advanced to $\frac{2\frac{7}{8}}{8}$ ths - Pembroke.

IRON-CLAD TURRET SHIPS:

- "Monarch," to launch and complete for sea - Chatham.
 "New Monarch," to be advanced to $\frac{3}{8}$ th - Chatham.

IRON FRIGATE:

- "Inconstant," to launch at Pembroke, and } Portsmouth.
 complete for sea at - - - - }

WOODEN VESSELS.

"Juno" Class:

- "Thalia" to be advanced to $\frac{5\frac{5}{8}}{8}$ ths - Woolwich.

"Druid" Class:

- "Druid," to be advanced to $\frac{4\frac{1}{2}}{8}$ ths - Deptford.
 "Briton," to be advanced to $\frac{1\frac{1}{2}}{8}$ ths - Sheerness.

WOODEN VESSELS—continued.

"Blanche" Class:

- "Spartan," to launch at Deptford, and } Woolwich.
 complete for sea at - - - }
 "Sirius," to launch and complete for sea - Portsmouth.
 "Dido," to be advanced to $\frac{3}{8}$ ths - Portsmouth.
 "Tenedos," to be advanced to $\frac{3}{8}$ ths - Devonport.

"Plover" Class:

- "Curlew," to launch at Deptford, and } Woolwich.
 complete for sea at - - - }
 "Woodlark," to be advanced $\frac{1}{8}$ th - Chatham.
 "Vulture," to be advanced to $\frac{2}{8}$ ths - Sheerness.
 "Swallow," to launch and complete for } Portsmouth.
 sea - - - - - }
 "Bittern," to be advanced to $\frac{3}{8}$ ths - Pembroke.

Mooring Lighters:

- One to build complete - - - - Portsmouth.
 One to build complete - - - - Devonport.

ALREADY LAUNCHED.

IRON-CLAD FRIGATE:

- "Hercules," to complete for sea - - - Chatham.

WOODEN VESSELS.

"Plover" Class:

- "Maggie," to complete for sea - - - Portsmouth.
 "Seagull," to complete for sea - - - Devonport.

BUILDING by CONTRACT, to be completed for Sea at the Dockyards, after being received from the Contractors.

TURRET SHIP FOR MELBOURNE:

- "Cerberus" - - - - - Portsmouth.

IRON CORVETTES:

- "Volage" - - - - - Portsmouth.
 "Active" - - - - - Portsmouth.

COMPOSITE GUN VESSELS:

- "Rocket" - - - - - Woolwich.
 "Teazer" - - - - - Portsmouth.

COMPOSITE GUN VESSELS—continued.

- "Hornet" - - - - - Portsmouth.
 "Midge" - - - - - Devonport.
 "Hart" - - - - - Devonport.
 "Pert" - - - - - Devonport.
 "Growler" - - - - - Devonport.
 "Lynx" - - - - - Devonport.

TUG:

- "Grinder" - - - - - Portsmouth.

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

DEPTFORD YARD.

Number of Ship.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS.	
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.			
BUILDING AND COMPLETING FOR SEA:												
2	Gun-vessel	3	663	160	"Curlew" -	3	249	3½	290	29	To launch. To complete for sea at Woolwich.	
1	Sloop -	6	1,268	350	"Spartan" -	2¾	436	3¾	594	59	To launch. To complete for sea at Woolwich.	
4	Corvette -	12	1,322	350	"Druid" -	-	-	4½	744	76		
Additional Vessels to complete for Sea (after Launching) - Nil -								-	-	-		
TOTAL -								-	11¾	1,628	164	
Repairs, &c.:												
The following Ships require repairs, but whether they are taken in hand or not must depend on their condition when examined in dock; viz.—												
"Shearwater," "Torch," "Racer," all Yard Craft, Store Ships, &c.								-	-	70		
Houses, Mast	-	-	-	-	-	-	-	-	-	-	—	
„ Boat	-	-	-	-	-	-	-	-	-	-	—	
„ Capstan	-	-	-	-	-	-	-	-	-	-	—	
Single Stationed Acting Leading Men, &c.								-	-	12		
Total Working Strength -								-	-	246		
Absent, Sick Leave, &c. -								-	-	13		
GRAND TOTAL Estimated for								{	Established - - - 259	259		
								{	Hired - - - Nil			

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

WOOLWICH YARD.

Number of Slip.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS.				
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.						
BUILDING AND COMPLETING FOR SEA :															
5	Converted Iron-clad Frigate.	12	3,716	800	" Repulse "	-	6	2,786	2	930	103	To launch and com- plete for sea.			
4	Corvette -	6	1,459	400	" Thalia "	-	2½	409	3⅜	615	61				
Additional Vessels to complete for Sea (after Launching) -						" Curlew "	-	-	-	1½	124		12		
						" Spartan "	-	-	-	-	1½		238	24	
						" Rocket "	-	-	-	-	-		30	3	
TOTAL						-	-	-	8⅜	1,937	203				
Repairs, &c. :															
The following Ships require repairs, but whether they are taken in hand, or not, must depend on their condition when examined in Dock, viz. :—															
" Barrosa," " Ranger," " Wolverine," " Niger," " Mutine," " Enterprise," " Buffalo," " Megæra," " Fox," " Hesper," " Dee," " Industry," " Supply," all Yachts, Tenders, Yard Craft, and Hulks										215					
Houses, Mast	-	-	-	-	-	-	-	-	-	-	30				
" Boat	-	-	-	-	-	-	-	-	-	-	20				
" Capstan	-	-	-	-	-	-	-	-	-	-	5				
Single Stationed Acting Leading Men, &c.	-	-	-	-	-	-	-	-	-	-	24				
Total Working Strength										-	-	-	497		
Absent, Sick Leave, &c.										-	-	-	28		
GRAND TOTAL Estimated for										{ Established	-	-	-	525	525
										{ Hired	-	-	-	Nil.	

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

CHATHAM YARD.

Number of Slip.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS.
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.		
BUILDING AND COMPLETING FOR SEA :											
Dock No. 2	Iron-clad Frigate.	12	5,226	1,200	" Hercules " -	6	3,919	2	1,307	200	To complete for sea after launching.
Dock No. 3	Iron-clad Turret Ship.	6	5,100	1,000	" Monarch " -	4½	3,028	3½	2,072	317	
3	Gun-vessel	3	663	160	" Woodlark " -	-	-	1	83	8	To launch and com- plete for sea.
Dock No. 2	Iron-clad Frigate.	12	5,226	1,200	" New Hercules "	-	-	2½	1,488	225	
Dock No. 3	Iron-clad Turret Ship.	-	-	-	" New Monarch "	-	-	½	325	50	
Additional Vessels to complete for Sea (after Launching) - Nil -								-	-	-	
TOTAL - - - -								9	5,275	800	
Repairs, &c. :											
To repair and refit Yard Craft, &c. - - - - -										12	
Houses, Mast - - - - -										20	
„ Boat - - - - -										30	
„ Capstan - - - - -										3	
Single Stationed, Acting Leading Men, &c. - - - - -										32	
Total Working Strength - - - - -										897	
Absent, Sick, Leave, &c. - - - - -										48	
GRAND TOTAL Estimated for { Established - - - - -										570	945
{ Hired - - - - -										375	

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

S H E E R N E S S Y A R D .

Number of Slip.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS.	
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.			
BUILDING AND COMPLETING FOR SEA :												
1	Corvette -	12	1,322	350	" Briton "	-	-	-	1½	248	25	
Dock	Gun Vessel	3	663	160	" Vulture "	-	½	41	1½	124	12	
Additional Vessels to complete for } Sea (after Launching) - - }						-	-	-	-	-	-	
TOTAL - - - -						-	-	-	3	372	37	
Repairs, &c. :												
The following Ships require repairs, but whether they are taken in hand or not must depend on their condition when examined in Dock, viz. :—												
"Cossack," "Forte," "Columbine," "Scylla," "Salamander," "Snipe," "Espoir," "Ajax," "Fawn," "Terrible," "Basilisk," "Cadmus," "Landrail," "Medusa," "Scout;" all Yachts, Tenders, Yard Craft, and Hulks. Maintain all Harbour Ships and Ships in Reserve. Coast Guard Ships ("Duncan," "Pembroke," and "Dauntless") - - - - -										368		
Houses, Mast		-	-	-	-	-	-	-	-	-	40	
" Boat -		-	-	-	-	-	-	-	-	-	20	
" Capstan		-	-	-	-	-	-	-	-	-	4	
Single Stationed Acting Leading Men, &c.						-	-	-	-	-	16	
Total Working Strength -						-	-	-	-	-	485	
Absent, Sick Leave, &c. -						-	-	-	-	-	26	
GRAND TOTAL Estimated for						{ Established - - - - 511 }				511		
						{ Hired - - - - Nil }						

APPENDIX, No 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

PORTSMOUTH YARD.

Number of Slip.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS.
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.		
BUILDING AND COMPLETING FOR SEA :											
1	Sloop -	6	1,268	350	" Sirius" - -	6	951	2	317	32	To launch and com- plete for sea.
2	Ditto -	6	1,268	350	" Dido" - -	1½	237	1½	237	24	
3	Gun Vessel	3	663	160	" Magpie" -	7	581	1	82	8	To complete for sea after launching.
4	Ditto -	3	663	160	" Swallow" -	6	497	2	166	17	To launch and com- plete for sea.
	About		200	-	Mooring Lighter	-	-	8	200	20	
Additional Vessels to complete for Sea (after Launching) -						" Teazer" - - - -	-	-	30	3	
						" Hornet" - - - -	-	-	30	3	
						" Grinder" - - - -	-	-	20	2	
						" Volage" - - - -	-	-	60	6	
						" Active" - - - -	-	-	60	6	
						" Cerberus" - - - -	-	-	60	6	
						" Inconstant" - - - -	-	-	¾	373	37
TOTAL - - - -						15½	1,635	164			
Repairs, &c. :											
The following Ships require repairs, but whether they are taken in hand or not must depend on their condition when examined in Dock, viz. :—											
" Resistance," " Valiant," " Esk," " Sharpshooter," " Highflyer," " Cygnet," " Sparrowhawk," " Glasgow," " Octavia," " Blazer," " Swan," " Wave," " Peacock," " Cherokee," " Brave," " Serapis," " Crocodile," " Orontes," " Simoom," " Wallace," " Erebus;" all Yachts, Tenders, Yard Craft, and Hulks ; all Gunnery and Training Ships, and such portions of the Channel Fleet as may be sent there. Coast Guard Ships (" Frederick William" and " Irresis- tible"). Maintain all Harbour Ships and Ships in Reserve - - - -										527	
Houses, Mast	-	-	-	-	-	-	-	-	-	65	
" Boat	-	-	-	-	-	-	-	-	-	65	
" Capstan	-	-	-	-	-	-	-	-	-	26	
Single Stationed Acting Leading Men, &c.	-	-	-	-	-	-	-	-	-	40	
Total Working Strength	-	-	-	-	-	-	-	-	-	887	
Absent, Sick Leave, &c.	-	-	-	-	-	-	-	-	-	51	
GRAND TOTAL Estimated for						Established	-	-	-	938	938
						Hired	-	-	-	-	

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—continued.

DEVONPORT YARD.

Number of Slip.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS.	
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.			
BUILDING AND COMPLETING FOR SEA :												
4	Gun Vessel	3	663	160	"Seagull" -	6½	539	1½	124	13	To complete for sea after launching.	
2	Sloop -	6	1,268	350	"Tenedos" -	1½	237	1½	237	24		
	About -		200	-	Mooring Lighter	-	-	8	200	20		
Additional Vessels to complete for Sea (after Launching) -						"Midge" -	-	-	-	150	15	
						"Hart" -	-	-	-			-
						"Pert" -	-	-	-			-
						"Growler" -	-	-	-			-
						"Lynx" -	-	-	-			-
TOTAL						-	-	-	11	711	72	
Repairs, &c. :												
The following Ships require repairs, but whether they are taken in hand or not must depend on their condition when examined in Dock, viz. :—												
"Northumberland," "Black Prince," "Achilles," "Valorous," "Agincourt," "Triton," "Steady," "Gannet," "Nimble," "Penguin," "Constance," "Sphinx," "Cordelia," "Assurance," "Brisk," "Gladiator," "Research," "Himalaya," "Urgent," "Tamar," "Prince of Wales," "Windsor Castle," "Albion," "Canopus," "Centurion," "Forth," "Seahorse," "Creole," "Ata- lanta," Coal depôt to replace "Fly;" all Yachts, Tenders, Yard Craft, and Hulks; all Gunnery and Training Ships, and such portions of the Channel Fleet as may be sent there. Coast Guard Ships ("St. George," "Royal George," "Lion" and "Donegal"). Maintain all Harbour Ships, and Ships in Reserve -										541		
Houses, Mast	-	-	-	-	-	-	-	-	-	60		
„ Boat -	-	-	-	-	-	-	-	-	-	55		
„ Capstan	-	-	-	-	-	-	-	-	-	35		
Single Stationed Acting Leading Men, &c.	-	-	-	-	-	-	-	-	-	32		
Total Working Strength -	-	-	-	-	-	-	-	-	-	795		
Absent, Sick Leave, &c. -	-	-	-	-	-	-	-	-	-	42		
GRAND TOTAL Estimated for						Established -	-	-	837	837		
						Hired -	-	-	-			Nil

APPENDIX, No. 13.—Programme of Shipbuilding Works, &c., 1868-69—*continued.*

P E M B R O K E Y A R D.

Number of Slip.	Rate.	Guns.	Tonnage.	H. P.	NAME OF SHIP.	Probable State of Advancement of the Ship on the 31st March 1868.		To be Advanced in 1868-69.		Number of Men to be Employed in 1868-69.	REMARKS	
						In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.	In Eighths and Fractional Parts of an Eighth.	Equiva- lent Tonnage.			
BUILDING AND COMPLETING FOR SEA :												
4	Iron Fri- gate.	16	3,978	1,000	"Inconstant" -	4 $\frac{5}{8}$	2,298	2 $\frac{5}{8}$	1,307	131	To launch. To com- plete for sea at Portsmouth.	
7	Gun Vessel.	3	663	160	"Bittern" -	-	-	3	248	25		
-	Iron-clad Frigate.	14	3,774	800	"Iron Duke" -	-	-	2 $\frac{7}{8}$	1,356	204		
Additional Vessels to complete for Sea (after Launching) - Nil -								-	-	-		
TOTAL						-	-	-	8 $\frac{1}{2}$	2,911	360	
Repairs, &c. :												
The following Ships require repairs, but whether they are taken in hand or not must depend on their condition when examined in Dock, viz. :—												
Coast Guard Ship ("Revenge," "Lightning," Yard Craft, &c. Maintain "Nankin" and "Hope" - - - - -)										5		
Houses, Mast	-	-	-	-	-	-	-	-	-	-		
" Boat	-	-	-	-	-	-	-	-	-	-	3	
" Capstan	-	-	-	-	-	-	-	-	-	-	2	
Single Stationed Acting Leading Men, &c.	-	-	-	-	-	-	-	-	-	-	15	
Total Working Strength										-	385	
Absent, Sick Leave, &c.										-	21	
GRAND TOTAL Estimated for										{ Established - - - 406	406	
										{ Hired - - - Nil		

APPENDIX, No. 14.

STATEMENT of the NUMBER and DESCRIPTION of WORKMEN authorised as the ESTABLISHMENTS at the several DOCKYARDS AT HOME.

Description of Workmen, &c.	Deptford.	Woolwich.	Chatham.	Sheerness.	Portsmouth.	Devonport.	Pembroke.	TOTAL.
	No.	No.	No.	No.	No.	No.	No.	No.
Shipwrights and Apprentices - - -	259	525	570	511	938	837	406	4,046
Caulkers and Apprentices - - -	15	29	41	41	103	77	30	336
Joiners - - -	29	84	99	75	143	148	55	633
Sawyers - - -	8	17	21	6	56	34	33	175
Smiths and Apprentices	42	111	175	125	199	190	87	929
Workmen and Millwrights' Shop and Apprentices - -	3	1	68	2	-	4	19	97
Turners.				Turners.		Turners.		
Workmen at Block, Saw, and Metal Mills -	15	20	103	11	62	29	20	260
Riggers - - -	3	68	59	85	154	134	3	486
Sailmakers and Apprentices - - -	17	13	15	17	30	32	1	125
Spinners and House Boys - - -	-	-	39	1	-	51	-	91
Other Trades - - -	45	73	131	82	126	127	44	628
For Description see Statement 4.								
Labourers - - -	69	115	119	100	203	189	84	879
Establishment - -	505	1,036	1,440	1,056	2,014	1,852	782	8,685
Hired Labourers, 1st Class, entitled to Pensions - - -	26	68	52	16	61	201	65	489
TOTAL Numbers - -	531	1,104	1,492	1,072	2,075	2,053	847	9,174
Amount of Wages - £.	£. 33,947	£. 71,555	£. 97,606	£. 70,586	£. 133,781	£. 129,796	£. 53,777	£. 591,048

APPENDIX, No. 15.

STATEMENT of the DISTRIBUTION of HIRED ARTIFICERS, LABOURERS, &c., in the several DOCKYARDS AT HOME.

Description of Workmen, &c.	Deptford.	Woolwich.	Chatham.	Sheerness.	Portsmouth.	Devonport.	Pembroke.	Haulbowline.	TOTAL.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Hired Artificers and Labourers, with reference to the Establishment of Shipwrights - - -	-	2	1,572	-	359	25	426	18	2,402
Hired Labourers, 1st Class (not entitled to Pensions) -	91	214	-	93	155	119	64	-	736
Hired Coppermiths, in Portsmouth Yard, to make Condensers - - -	-	-	-	-	45	-	-	-	45
Hired Workpeople for the Spinning Machines in the Ropery - - -	-	-	62	-	-	37	-	-	99
Colour Women - - -	-	15	5	4	7	12	-	-	43
TOTAL Numbers - - -	91	231	1,639	97	566	193	490	18	3,325
Amount of Wages - - £.	£. 3,323	£. 8,292	£. 80,196	£. 3,490	£. 21,696	£. 6,457	£. 18,736	£. 670	£. 142,860

APPENDIX, No. 16.

STATEMENT of the NUMBER and DESCRIPTION of WORKMEN estimated for in the STEAM FACTORIES at WOOLWICH, SHEERNESS, PORTSMOUTH, and DEVONPORT.

DESCRIPTION OF WORKMEN, &c.	Woolwich.	Sheerness.	Portsmouth.	Devonport (Keyham).	TOTAL.
	No.	No.	No.	No.	No.
Draughtsmen and Writers - - - -	9		10	9	36
Assistant Timekeepers and Recorders of Work	4	4	5	4	17
Leading Men of Stores - - - -	1	1	1	1	4
Store Porters, Messengers, and Boys - -	5	5	5	5	20
Engine-keepers - - - -	6	8	11	11	36
Pattern-makers, including Leading Men, Assistants, and Boys - - - -	16	14	25	19	74
Fitters and Erectors, Assistants, and Boys -	175	140	250	198	763
Millwrights, &c., including those on the establishment formerly under Master Shipwright	12	18	89	59	178
Boiler-makers, Assistants, and Rivet Boys -	191	142	199	213	745
Engine-smiths and Hammermen - - -	43	27	34	42	146
Founders - - - -	31	21	49	33	134
Coppersmiths - - - -	22	26	26	17	91
Painters - - - -	2	1	4	3	10
Labourers - - - -	142	87	112	178	519
TOTAL Numbers - - -	659	502	820	792	2,773
Amount of Wages - - - £.	£. 40,530	£. 31,277	£. 54,781	£. 46,414	£. 173,002

APPENDIX, No. 17.

STATEMENT of the NUMBERS and DESCRIPTION of WORKMEN authorised as the ESTABLISHMENTS at the several VICTUALLING YARDS at HOME.

DESCRIPTION OF WORKMEN.	Royal Victoria Yard.	Royal Clarence Yard.	Royal William Yard.	Haulbowline.	TOTAL.
	No.	No.	No.	No.	No.
Coopers and Apprentices - - - -	50	19	19	1	89
Sawyers - - - -	4	2	1	-	7
Blacksmiths - - - -	6	5	4	-	15
Millers and Millers' Boy - - - -	7	5	3	-	15
Bakers and Bakers' Boys - - - -	21	13	13	-	47
Other Trades - - - -	47	16	13	2	78
Leading Men of Stores, 1st Class - - -	3	3	3	-	9
Ditto - ditto - 2d Class - - -	7	4	3	-	14
Storehousemen, 1st Class - - - -	2	-	-	-	2
Ditto - 2d Class - - - -	10	6	6	-	22
Leading Men of Labourers - - - -	7	2	2	1	12
Labourers - - - -	60	17	16	8	101
TOTAL Numbers - - -	224	92	83	12	411
Amount of Wages - - - £.	£. 23,160	£. 7,295	£. 6,954	£. 1,310	£. 38,719

APPENDIX, No. 18.

DETAILED STATEMENT of the SUMS required for Works under £. 500 each, taken under
Vote No. 11, "NEW WORKS, BUILDINGS, MACHINERY, and REPAIRS."

ESTABLISHMENT.	DESCRIPTION OF WORK.	AMOUNT.	PAGE.
		£.	
Woolwich - -	Completion of Iron Racks in Storehouse Yard	200	98
	Ventilation to Yard Smithery - - - -	370	
	Continuation of Tramway between Central Storehouse and Crane No. 7 - - - -	110	
	Gas Fittings for Chapel - - - - -	150	
	TOTAL - - -	830	
Chatham - -	Muster Station - - - - -	250	99
	Extension of Machinery Shop at Slip No. 7 -	400	
	Alterations at Angle Iron Smithery near Joiner's Shop - - - - -	380	
	Enclosure to Boiler-maker's Yard - - -	170	
	Warming Spinning Room - - - - -	340	
	TOTAL - - -	1,540	
Sheerness - -	Fenders at Entrance of Dock No. 3 - - -	120	99
	Removing old Gates from Dock No. 3 - -	250	
	Dredging Mud from Basins and Cambers -	400	
	TOTAL - - -	770	
Portsmouth - -	Ventilators and Sashes in Buildings over Boat Pond - - - - -	180	100
	Naval Recruiting Office - - - - -	120	
	TOTAL - - -	300	
Devonport - -	Muster Office - - - - -	180	100
	Zincing Shop - - - - -	90	
	Additional Water-closets and Urinals - -	300	
	Paving in "Fore-street," "Queen-street," and "Dock Wall-street" - - - - -	250	
	Surgery - - - - -	300	
	TOTAL - - -	1,120	
Keyham - -	Interest on Outlay for Branch Line of Railway into the Yard from the Cornwall Railway -	380	101
	Gas Fittings for lighting Ships in North Basin	290	
	TOTAL - - -	670	
Pembroke - -	Extension of Furnace Shed and Machine Shop at head of Slip No. 2 - - - - -	490	101
	Angle Iron Furnace - - - - -	200	
	Plate Iron Furnace - - - - -	260	
	Shed to receive a Riveting Machine - -	150	
	Extension of Railways - - - - -	250	
	Gas Fittings for lighting the "Iron Duke" (under construction) - - - - -	70	
	TOTAL - - - £.	1,420	

Appendix, No. 18.—DETAILED STATEMENT of the Sums required for Works, &c.—*continued.*

ESTABLISHMENT.	DESCRIPTION OF WORK.	AMOUNT.	PAGE.
		£.	
Haslar Hospital -	Lifts for Patients - - - - -	90	
	Additions to Dead House - - - - -	300	
	TOTAL - - - - -	390	103
Plymouth Hospital	Additions to Dead House - - - - -	300	
	TOTAL - - - - -	300	103
Yarmouth Hospital	Officers' Day Ward - - - - -	100	
	Drinking Fountains for Airing-ground - - - - -	250	
	Reception Rooms for Visitors - - - - -	220	
	Iron Posts and Lines for Drying-grounds - - - - -	410	
	Vegetable Mould for the new Exercising-ground - - - - -	300	
	TOTAL - - - - -	1,280	103
Chatham Barracks -	Shed for Baggage Wagons, &c. - - - - -	150	
	TOTAL - - - - -	150	104
Eastney Barracks -	Shoemaker's Shop - - - - -	100	
	Carpenter's Shop - - - - -	130	
	Blacksmith's Shop - - - - -	120	
	TOTAL - - - - -	350	104
Plymouth Barracks	New Guard House at Long Room Battery - - - - -	130	
	New Quarters for Non-commissioned Officer in charge at Devil's Point Battery - - - - -	120	
	Iron Accoutrement Shelves, &c. to old Barrack Rooms - - - - -	190	
	TOTAL - - - - -	440	104
Deal Dépôt - - -	Converting present Stores and Schoolroom into Barrack Rooms - - - - -	110	
	Inclosing Land and forming Drill-ground - - - - -	300	
	TOTAL - - - - -	410	105
Jamaica Naval Yard	Boiler Shed - - - - -	250	
	TOTAL - - - - -	250	107
Vancouver's Island	Raising Storehouse, No. 9, &c. - - - - -	300	
	Enlarging Residence of Paymaster in charge - - - - -	440	
	Boat Slip - - - - -	150	
	Alterations in Factory Building - - - - -	100	
	TOTAL - - - - -	990	107
Ditto - Hospital	Naval Cemetery - - - - -	250	
	TOTAL - - - - -	250	109

APPENDIX, No. 19.

DETAILED STATEMENT of the SUMS required for REPAIRS and MAINTENANCE of BUILDINGS, taken under Vote No. 11, "New Works, Buildings, Machinery, and Repairs."

	Class 1.	Class 2.	Class 3.		Class 4.	Class 5.	Class 6.	Class 7.	Class 8.	Class 9.	Class 10.	TOTAL	Page of Estimate.
	Dwellings.	Offices.	Workshops.		Storehouses.	Docks.	Slips.	Wharf Walls, Boundary Walls, &c.	Paving, Drains, &c.	Miscellaneous.	Gas Fittings.		
	£.	£.	Buildings.	Furnaces, &c.	£.	£.	£.	£.	£.	£.	£.	£.	
H O M E.													
Naval Yards:													
Deptford - - -	210	80	330	200	400	80	630	190	240	70	70	2,500	98
Woolwich - - -	60	30	770	570	610	500	500	160	320	80	200	3,800	98
Chatham - - -	80	230	1,600	900	610	110	220	200	400	120	280	4,750	99
Sheerness - - -	340	40	320	200	590	260	180	80	80	70	140	2,300	99
Portsmouth, &c. - -	340	130	1,300	800	940	820	360	700	420	600	440	6,850	100
Devonport - - -	640	250	1,400	340	550	140	150	300	370	160	200	4,500	100
Keyham - - -	100	40	900	570	180	580	-	120	280	410	640	3,820	101
Pembroke - - -	100	100	450	680	520	40	720	120	490	140	380	3,740	101
Outports:													
Haulbowline - - -	190	230	10	-	140	-	-	40	30	60	-	700	102
Hobbs Point - - -	10	-	-	-	-	-	-	10	10	20	-	50	102
Portland - - -	-	-	-	-	-	-	-	-	-	330	-	330	102
Lewes Naval Prison - -	60	90	10	-	-	-	-	10	20	10	-	200	102
Victualling Yards:													
Royal Victoria - - -	90	40	660	-	810	-	-	130	80	120	70	2,000	102
Royal Clarence - - -	40	20	180	-	240	-	-	20	30	140	30	700	102
Royal William - - -	100	10	300	-	270	-	-	60	50	40	30	860	103
Medical Establishments:													
Woolwich - - -	-	740	-	-	-	-	-	30	40	180	10	1,000	105
Chatham - - -	120	70	50	-	10	-	-	10	120	10	70	460	105
Haslar - - -	120	1,720	10	-	10	-	-	430	50	40	20	2,400	103
Plymouth - - -	30	660	-	-	10	-	-	70	40	50	20	880	103
Yarmouth - - -	100	440	-	-	-	-	-	10	50	360	40	1,000	103
Marine Divisions:													
Deptford - - -	40	10	-	-	-	-	-	-	30	10	10	100	103
Woolwich - - -	300	230	30	-	50	-	-	10	60	20	50	750	103
Chatham - - -	470	40	20	-	10	-	-	40	60	20	40	700	104
Forton - - -	840	20	30	-	130	-	-	10	110	320	50	1,510	104
Eastney - - -	210	120	80	-	50	-	-	30	80	140	90	800	104
Plymouth - - -	480	180	10	-	30	-	-	-	20	40	40	800	104
Mill Bay - - -	150	-	-	-	-	-	-	-	-	30	20	200	104
Deal Depot - - -	420	100	20	-	-	-	-	-	-	50	10	600	105
Coast Guard - - -	6,500	-	-	-	-	-	-	-	-	-	-	6,500	105
Plymouth Breakwater - -	-	-	-	-	-	-	-	2,500	-	-	-	2,500	103
Admiralty Offices - - -	800	5,080	50	-	-	-	-	-	-	-	70	6,000	105
F O R E I G N.													
Naval Yards:													
Gibraltar - - -	90	30	-	-	60	-	-	-	-	60	-	240	105
Malta - - -	290	50	50	-	130	40	-	110	50	120	-	840	106
Bermuda Naval and Victualling - - -	610	120	30	-	70	-	-	120	150	50	-	1,150	106
Halifax - - -	390	140	10	-	320	-	50	390	140	60	-	1,500	107
Jamaica - - -	40	10	90	-	140	-	-	90	40	100	-	510	107
Antigua - - -	90	10	-	-	50	-	-	10	10	20	-	190	107
Barbadoes - - -	-	-	-	-	110	-	-	-	-	-	-	110	107
Ascension - - -	100	80	20	-	10	-	-	-	60	30	-	300	107
Vancouver's Island - -	140	-	-	-	130	-	-	-	-	-	-	270	107
Cape of Good Hope - -	100	20	50	-	100	-	-	50	50	50	-	420	108
Trincomalee - - -	100	20	50	-	80	-	-	60	80	80	-	470	108
Hong Kong and Kowloon -	90	30	60	-	70	-	-	60	30	10	-	350	108
Victualling Yards:													
Gibraltar - - -	50	-	-	-	100	-	-	10	-	-	-	160	108
Malta - - -	50	20	100	-	70	-	-	30	20	30	-	320	108
Halifax - - -	60	30	-	-	-	-	-	80	10	-	-	180	108
Cape of Good Hope - -	40	-	-	-	30	-	-	-	-	30	-	100	108
Medical Establishments:													
Lisbon - - -	20	80	-	-	-	-	-	-	-	-	-	100	109
Malta - - -	320	160	-	-	30	-	-	70	40	70	-	690	109
Bermuda - - -	60	310	-	-	-	-	-	90	30	10	-	500	109
Jamaica - - -	20	80	-	-	10	-	-	20	10	20	-	140	109
Cape of Good Hope - -	30	60	-	-	-	-	-	-	-	10	-	100	109
Vancouver's Island - -	90	120	-	-	30	-	-	70	10	-	-	320	109
Yokohama - - -	-	150	-	-	-	-	-	-	-	-	-	150	109
TOTAL - - - £.	15,720	12,200	13,250		7,700	2,570	2,810	6,540	4,210	4,390	3,020	72,410	

APPENDIX, No. 20.

STATEMENT of PAY of Superintending Engineers, Clerks of Works, Draughtsmen, Clerks, Foremen, Office Keepers, &c., temporarily employed on Engineering and Architectural Works and Repairs, provided for under Vote No. 11.

Superintending and Assistant Civil Engineers.	Clerks of Works.	Draughtsmen and Clerks.	Foremen.	Office Keepers.	Establishments.	Required for the Year 1868-69.
						£.
—	—	—	1	—	London - - -	130
—	—	1	—	—	Deptford - - -	155
—	—	—	1	1	Woolwich - - -	145
2	2	8	12	2	Chatham - - -	4,315
—	—	1	—	1	Sheerness - - -	195
1	1	10	5	2	Portsmouth - - -	2,555
—	1	—	—	—	Eastney - - -	275
—	—	1	2	—	Gosport - - -	400
—	—	3	1	1	Devonport - - -	665
—	—	2	1	1	Keyham - - -	480
—	—	—	—	1	Plymouth - - -	25
—	—	2	1	1	Pembroke - - -	480
—	—	1	2	—	Haulbowline - - -	320
—	1	—	—	—	Yarmouth - - -	50
—	—	4	5	—	Coast Guard - - -	1,270
—	—	2	1	—	Gibraltar - - -	305
1	—	5	—	—	Malta - - -	1,260
—	—	—	3	1	Bermuda - - -	470
—	—	1	1	—	Halifax - - -	220
—	—	—	1	—	Hong Kong - - -	125
4	5	41	37	11	TOTAL - - £.	13,840

No.	
4	Superintending and Assistant Civil Engineers, Salaries varying from 375 <i>l.</i> to 750 <i>l.</i> p' ann.
4	Clerks of Works - - - - - ditto 200 <i>l.</i> to 300 <i>l.</i> p' ann.
41	Draughtsmen and Clerks - - - - - ditto 40 <i>l.</i> to 250 <i>l.</i> p' ann.
37	Foremen - - - - - ditto 4 <i>s.</i> 6 <i>d.</i> per day to 10 <i>s.</i> 6 <i>d.</i> p' day.
11	Office Keepers - - - - - ditto 1 <i>s.</i> 6 <i>d.</i> per day to 4 <i>s.</i> per day.
1	Clerk of Works under War Department allowed an addition to his pay of 1 <i>l.</i> per week.
98	- - TOTAL.

Note.--The foregoing appointments are temporary, and liable to change, in proportion to the character and extent of the works authorised, for which this extra superintendence is required.

APPENDIX, No. 21.

A RETURN, giving an Analysis of the EXPENDITURE in the Year 1866-67 (the last Financial Year closed), for MISCELLANEOUS PAYMENTS and ALLOWANCES.

	£.	s.	d.
Proctor's Expenses in procuring condemnation of Piratical Junks captured by Her Majesty's Ships - - - - -	22	4	3
Payments to Professional Persons, Ministers of Religion, and others, for Special Services, &c.; and Wages, &c. of Interpreters - - - - -	1,477	10	9
Subsistence, Travelling Expenses, &c., of Naval Officers on Special Services	318	6	11
Wages of Petty Officers and Seamen employed as Signal men between St. Ann's Head and Pembroke Dockyard - - - - -	162	19	-
Payment to the "Bombay" relief fund, in compliance with the wish of the Officers and Crew of the Frigate "L'Astrée" of the French Imperial Navy, of the Sum awarded to them by the Lords of the Admiralty in recognition of their generous assistance to the Survivors of the loss of H.M.S. "Bombay;" and Presentation Watches, &c. to Officers of Foreign Navies, &c. for Services rendered to Sick and other Officers and Men of the Royal Navy - - -	547	10	-
Expenses incurred on account of the Establishments of Her Majesty and the Royal Family - - - - -	1,942	3	4
Postages by Captains, Paymasters, and Consuls; conveyance of Despatches; Quarantine Expenses; and Per-centage on Payments by Commission Agents, &c. - - - - -	693	13	5
Freight of Specie for the use of Her Majesty's Ships - - - - -	95	6	-
Conveyance and Stowage of Guns, Powder, Shot, and Shell - - - - -	624	11	10
Rents of Drill Ground and Rifle Range at Devonport; of Pier at Cowes for use of Her Majesty's Ships; and of other Premises, &c., for the Naval Service - - - - -	693	14	2
Copies of the Commercial Code of Signals for use of the Royal Navy; compiling and printing a Cypher for use of the Admiralty; Incidental Expenses attending the Apprehension of Deserters at Out-posts in Canada; cutting a Trench through the Ice at Quebec for H.M.S. "Aurora;" Gun-shot Rewards; Bands of Music on board Her Majesty's Ships; and other Contingent Expenses - - - - -	1,785	11	3
TOTAL EXPENDITURE for Miscellaneous Payments and } Allowances in the Year 1866-67 - - - - }	8,363	10	11

AN ACCOUNT of the NAVAL OLD STORE MONEYS and EXTRA RECEIPTS brought to Account between the 1st April 1866 and the 31st March 1867, and paid over Quarterly to the Exchequer, instead of being appropriated in aid of the Naval Grants on the Estimates, pursuant to directions contained in the Treasury Minutes of 2nd May 1848 and 12th December 1863.

HEADS OF OLD STORE MONEYS AND EXTRA RECEIPTS.	Amount of Old Store Moneys.	Amount of Extra Receipts.	TOTAL.	VOTE of the Navy Estimates under which formerly the Credits in Aid were appropriated.
	£. s. d.	£. s. d.	£. s. d.	
Discharges of Seamen and Marines - - - - -	- - -	4,027 1 9	} 4,126 12 3	No. 1.
Barrack Schools (Contributions towards Education) - - -	- - -	99 10 6		
Old Stores, Victualling (Sales) - - - - -	11,602 3 2	- - -	} 17,885 14 -	No. 2.
Old Seamen's Clothing, Marine Stores, &c. (Sales) - - -	6,283 10 10	- - -		
Sale of Charts - - - - -	- - -	4,156 3 11	4,156 3 11	No. 5.
Barrack Rents (Rents of Canteens and Shops) - - -	- - -	97 6 6	97 6 6	No. 9.
Old Stores, Naval (Sales) - - - - -	59,126 11 -	- - -	} 148,214 7 2	No. 10.
Proceeds of the Sale of Old Ships - - - - -	52,380 19 8	- - -		
Sale of Ships - - - - -	- - -	9,061 11 6		
Per-centage on Cabin and Superintendents' Furniture, for its use	- - -	1,881 10 10		
Repayments, Naval (Supplies of Stores) - - - - -	- - -	25,763 14 2		
Old Stores, Medical (Sales) - - - - -	475 11 8	- - -	} 578 16 10	No. 12.
Repayments, Medical (Supplies of Stores) - - - - -	- - -	103 5 2		
Penalties, Fines, &c. - - - - -	- - -	3,095 15 -	} 7,758 15 4	No. 14.
Sale of Naval Property - - - - -	- - -	5 10 -		
Rents of Naval Premises - - - - -	- - -	4,227 11 11		
Per-centage on Port Admirals' Furniture, for its use	- - -	376 - 11		
Miscellaneous Receipts - - - - -	- - -	113 17 6		
Old Stores, Army Service (Sales of Transport Stores) - - -	1,722 3 7	- - -	1,722 3 7	No. 17.
Old Store Moneys - - - - -	£. 131,590 19 11	} - £.	184,539 19 7	
Extra Receipts - - - - -	52,948 19 8			

Admiralty, }
13 February 1868. }

J. Beeby,
Accountant General of the Navy.

NAVY ESTIMATES,

FOR

THE YEAR

1868-69,

WITH APPENDIX.

[ACCOUNT OF NAVAL OLD STORE MONIES and
EXTRA RECEIPTS in 1866-67.]

(Presented to Parliament by Command of Her Majesty.)

*Ordered, by The House of Commons, to be Printed,
17 February 1868.*

[*Price 2 s.*]

GREENWICH HOSPITAL.

E S T I M A T E

FOR

GREENWICH HOSPITAL AND SCHOOL,

FOR THE YEAR 1868-69.

(The Expenditure to be repaid from Greenwich Hospital Funds, per Act 28 & 29 Vict. c. 89.)

[Separated from the Navy Estimates, but prepared by the Naval Department.]

Ordered, by The House of Commons, to be Printed,
17 February 1868.

GREENWICH HOSPITAL AND SCHOOL.

I. ESTIMATE of the Sum which will be required in the Year ending 31st March 1869, to defray the EXPENSES of GREENWICH HOSPITAL and SCHOOLS.

One Hundred and Twenty-seven Thousand Six Hundred and Eight Pounds.

(The Expenditure to be repaid from Greenwich Hospital Funds to Her Majesty's Exchequer, and form part of the Consolidated Fund, per Act 28 & 29 Vict. c. 89, s. 51.)

II. SUB-HEADS under which this Vote will be accounted for.

	1868-69.	1867-68.	INCREASE.	DECREASE.
	£.	£.	£.	£.
GREENWICH HOSPITAL.				
A.—SALARIED ESTABLISHMENT (ADMIRALTY) - - - - -	1,303	1,267	36	—
B.—OFFICE OF COMPTROLLER OF GREENWICH HOSPITAL ESTATES, &c. - - - - -	1,473	1,458	15	—
C.—SALARIES AND ALLOWANCES, HOUSEHOLD AND INFIRMARY	7,145	8,097	-	952
D.—RATES AND TAXES - - - - - DITTO - -	280	260	20	—
E.—LIGHTING WITH GAS - - - - - DITTO - -	690	880	-	190
F.—CONTINGENCIES - - - - - DITTO - -	2,089	2,079	10	—
G.—WAGES - - - - - DITTO - -	8,715	9,131	-	416
H.—REPAIRS AND MAINTENANCE OF BUILDINGS, DITTO - -	4,410	6,040	-	1,630
I.—PROVISIONS, CLOTHING, BEDDING, AND STORES - - - - - DITTO - -	11,100	12,100	-	1,000
K.—MEDICINES AND SURGICAL INSTRUMENTS, DITTO - -	500	900	-	400
L.—MONEY ALLOWANCES TO IN-PENSIONERS - - - - -	2,800	3,000	-	200
M.—SUPERANNUATION ALLOWANCES, HOUSEHOLD AND INFIRMARY - - - - -	1,574	1,631	-	57
PENSIONS.				
N.—PENSIONS TO FLAG AND OTHER OFFICERS - - - - -	5,485	5,485	—	—
O.—PENSIONS TO SEAMEN - - - - -	56,592	49,972	6,620	—
P.—GRATUITIES TO WIDOWS OF SEAMEN, &c. - - - - -	1,000	1,000	—	—
GREENWICH SCHOOL.				
Q.—SALARIES AND ALLOWANCES, GREENWICH SCHOOL - -	3,684	3,630	54	—
R.—RENTS, RATES, AND TAXES - - - - - DITTO - -	404	404	—	—
S.—LIGHTING WITH GAS - - - - - DITTO - -	180	250	-	70
T.—CONTINGENCIES - - - - - DITTO - -	1,786	2,086	-	300
U.—WAGES - - - - - DITTO - -	3,472	3,519	-	47
V.—REPAIRS AND MAINTENANCE OF BUILDINGS, DITTO - -	1,180	2,200	-	1,020
W.—PROVISIONS, CLOTHING, BEDDING, AND STORES - - - - - DITTO - -	11,311	12,811	-	1,500
X.—MEDICINES AND SURGICAL INSTRUMENTS, DITTO - -	100	100	—	—
Y.—SUPERANNUATION ALLOWANCES - - - - - DITTO - -	335	335	—	—
£.	127,608	128,635	6,755	7,782

NET DECREASE - - - £. 1,027.

III.

DETAILS of the foregoing.

GREENWICH HOSPITAL.			REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
A.—SALARIED ESTABLISHMENT (ADMIRALTY).				
DEPARTMENT OF THE ACCOUNTANT GENERAL:				
Clerk lent from Greenwich Hospital, from 90 <i>l.</i> to 300 <i>l.</i> per annum		£. s. d.	254 - -	420 - -
Allowance to ditto while employed at the Admiralty			184 - -	274 - -
Three Writers, at 5 <i>s.</i> a day each			274 - -	31 - -
Boy Messenger, at 12 <i>s.</i> a week			31 - -	2 - -
Additional day's pay for Leap year			- - -	- - -
DEPARTMENT OF THE MEDICAL DIRECTOR GENERAL:				
Two Clerks lent from Greenwich Hospital, from 90 <i>l.</i> to 300 <i>l.</i> per annum each			387 - -	367 - -
Allowance to ditto while employed at the Admiralty			173 - -	173 - -
	£.		1,303 - -	1,267 - -
B.—OFFICE OF COMPTROLLER OF GREENWICH HOSPITAL ESTATES, &c.				
Comptroller of the Greenwich Hospital Estates and Solicitor to Greenwich Hospital, viz.:	£. s. d.			
As Comptroller	500 - -		1,000 - -	1,000 - -
„ Solicitor	500 - -		373 - -	358 - -
One Senior Clerk to Comptroller, from 315 <i>l.</i> to 450 <i>l.</i> per annum			100 - -	100 - -
Allowance to the Comptroller for the services of a subordinate Clerk			1,473 - -	1,458 - -
	£.			
HOUSEHOLD AND INFIRMARY.				
SALARIED ESTABLISHMENT:				
Captain Superintendent			800 - -	800 - -
Two Lieutenants, at 230 <i>l.</i> each*			460 - -	460 - -
Inspector General of Hospitals			- - -	821 - -
Deputy Inspector General of Hospitals			608 - -	584 - -
Assisting Surgeon, acting as Surgeon and Medical Store-keeper			530 - -	530 - -
Four Assistant Surgeons			912 - -	912 - -
Allowances to Medical Officers for Servants, Fuel, and Lights			276 - -	361 - -
	£. s. d.			
Steward*	500 - -		600 - -	600 - -
Allowance to ditto for doing duties as Agent	100 - -		350 - -	500 - -
Chaplain* (the remaining portion of this Officer's salary, viz., 150 <i>l.</i> , being for general services rendered to the Navy, is provided for under Vote No. 14 of the Navy Estimates)			1,134 - -	1,089 - -
Clerks:			955 - -	912 - -
Three Senior, from 315 <i>l.</i> to 450 <i>l.</i> per annum				
Four, from 90 <i>l.</i> to 300 <i>l.</i> per annum				
	£. s. d.			
First Mate of the Victualling	120 - -		160 - -	160 - -
Allowance to ditto, not to be continued to successor	40 - -		130 - -	130 - -
Second Mate of the Victualling	100 - -		70 - -	70 - -
Allowance to ditto, not to be continued to successor	30 - -		60 - -	60 - -
Matron			100 - -	100 - -
Organist			- - -	8 - -
Clerk and Steward of Infirmary				
Additional day's pay to Medical Officers for leap year				
C.—SALARIES and ALLOWANCES, HOUSEHOLD and INFIRMARY	£.		7,145 - -	8,097 - -
D.—Rates and Taxes			280 - -	260 - -
E.—Lighting the Hospital with Gas			690 - -	880 - -
Carried forward	£.		8,115 - -	9,237 - -

* In addition to Half-pay.

GREENWICH HOSPITAL—continued.				REQUIRED for the Service of the Year 1868/69.		LAST VOTE for the Financial Year 1867/68.	
HOUSEHOLD AND INFIRMARY—continued.							
Salaried Establishment—continued.							
Brought forward - - -				£.	s. d.	£.	s. d.
				8,115	- -	9,237	- -
Washing - - - - -	-	-	-	1,200	- -	1,500	- -
Funerals - - - - -	-	-	-	100	- -	100	- -
Scripture Reader - - - - -	-	-	-	60	- -	60	- -
Allowance to Roman Catholic Priest - - - - -	-	-	-	25	- -	25	- -
Library - - - - -	-	-	-	35	- -	35	- -
Printed Forms, &c. - - - - -	-	-	-	25	- -	25	- -
Allowances in lieu of Stationery - - - - -	-	-	-	44	- -	44	- -
Watering and Scraping Roads, Carting Coals, Rubbish, &c.	-	-	-	100	- -	40	- -
Postage, Travelling Expenses, Advertisements, conducting Lunatics, Chapel Allowances, and other Miscellaneous Expenses - - - - -	-	-	-	500	- -	250	- -
F.—CONTINGENCIES, HOUSEHOLD } and INFIRMARY - - - } £.				2,089	- -	2,079	- -
Total Salaried Establishment - £.				10,204	- -	11,316	- -
G.—WAGES :							
For the Wages of Dispensary Assistants, Ward Matron, Ward Master, Nurses, Porters, Barbers, Cooks, Bakers, Labourers, &c., and for Clothing for Nurses - - - - -				7,376	- -	7,897	- -
For the Wages, Clothing, &c. of the Metropolitan Police Force employed at the Hospital and Schools, including Commutation for Clothing, Fuel and Contingent Expenses, at 3 s. per man per week, and for General Superintendence, at 3 s. 4 d. per man per month; viz.—							
1 Inspector - - - - - £.137 - -							
3 Serjeants - - - - - 242 - -							
14 Constables - - - - - 960 - -							
18				1,339	- -	1,234	- -
£.				8,715	- -	9,131	- -
H.—REPAIRS AND MAINTENANCE OF BUILDINGS :							
For Repairs and Maintenance of Buildings - - - - -				2,500	- -	5,530	- -
For Wages of the Temporary Establishment employed under the Director of Works to the Admiralty - - - - -				510	- -	510	- -
Diversion of Hospital Drainage into Metropolitan Sewers -				1,300	- -	—	
Repairs to Plant and Machinery - - - - -				100	- -	—	
£.				4,410	- -	6,040	- -
I.—For Provisions, Clothing, Bedding, and Stores of all kinds - - - - - £.				11,100	- -	12,100	- -
K.—For Medicines and Surgical Instruments - - - £.				500	- -	900	- -
L.—For Money Allowances to In-Pensioners, including additional Allowances to Married Men - - - £.				2,800	- -	3,000	- -
M.—For Superannuation Allowances to Nurses and Servants - - - - - £.				1,574	- -	1,631	- -
Number and Description of Pensioners paid out of the above Sum :							
85 Nurses.							
1 Foreman of Bakers.							
2 Cooks.							
1 Sculleryman.							
1 Warehouseman.							
90							
TOTAL GREENWICH HOSPITAL - £.				42,079	- -	46,843	- -

GREENWICH HOSPITAL—continued.		REQUIRED for the Service of the Year 1868/69.	LAST VOTE for the Financial Year 1867/68.
PENSIONS:		£. s. d.	£. s. d.
Greenwich Hospital Pensions to 10 Flag Officers, at 150 l. each - - - - -		1,500 - -	1,500 - -
Ditto - - to other Officers, at various rates -		3,985 - -	3,985 - -
N.—PENSIONS to FLAG and other } OFFICERS - - - - - } £.		5,485 - -	5,485 - -
382 Greenwich Hospital (Life) Pensions, at 13 l. 12 s. per annum, granted to Men of 70 years of age and upwards, who having been Pensioners for a period of not less than 10 years, elected to leave the Hospital on 1st October 1865 - - - - -		5,195 - -	5,412 - -
298 Greenwich Hospital (Life) Pensions, at 7 l. 12 s. per annum, granted to Men of 55 years of age and under 70, who having been Pensioners for upwards of five years, elected to leave the Hospital on the 1st October 1865 - - - - -		2,265 - -	2,614 - -
Money Allowances to the above Men, and also to 151 others, who, being In-pensioners of the Hospital, did not come within the regulations for an award of Greenwich Hospital Pensions, but, notwithstanding which, elected to leave it and revert to the Naval Pensions they had given up on admission - - - - -		9,802 - -	10,659 - -
1,083 Greenwich Hospital (Life) Pensions of 13 l. 12 s. per annum to Naval Pensioners of 70 years of age and upwards, resident in the United Kingdom, who have been Naval Pensioners for a period of not less than 10 years - - - - -		14,729 - -	14,796 - -
3,237 Greenwich Hospital (Life) Pensions of 7 l. 12 s. per annum to Naval Pensioners of 55 years of age and under 70, resident in the United Kingdom, who have been Naval Pensioners for a period of not less than five years - - - - -		24,601 - -	16,491 - -
5,000 O.—PENSIONS to SEAMEN - - - £.		56,592 - -	49,972 - -
P.—GRATUITIES:			
Gratuities to Widows of Seamen and Marines - - -		1,000 - -	1,000 - -
TOTAL PENSIONS - - - £.		63,077 - -	56,457 - -

GREENWICH SCHOOL.	REQUIRED for the Service of the Year 1868-69.	LAST VOTE for the Financial Year 1867-68.
SALARIED ESTABLISHMENT:	£. s. d.	£. s. d.
Principal and Chaplain - - - - -	500 - -	500 - -
Head Master, Nautical Division, 300 <i>l.</i> to 400 <i>l.</i> * - -	352 - -	342 - -
Three Head Masters - {1 at - - - - - 350 <i>l.</i> 2 from 250 <i>l.</i> to 300 <i>l.</i> each, 600 <i>l.</i> }	950 - -	950 - -
Allowances to one of the above, not to be continued to Successor - - - - -	54 - -	54 - -
Second Master, Nautical Division, 120 <i>l.</i> to 220 <i>l.</i> - -	170 - -	160 - -
Three Second Masters, from 120 <i>l.</i> to 180 <i>l.</i> - - -	496 - -	481 - -
Three Third Masters, from 105 <i>l.</i> to 150 <i>l.</i> - - -	390 - -	373 - -
Three Fourth Masters, from 80 <i>l.</i> to 120 <i>l.</i> - - -	262 - -	260 - -
French Master - - - - -	250 - -	250 - -
Allowances to the above:		
To a Master, for acting as Organist - - - - -	20 - -	20 - -
To three Head Masters, for additional Instruction to Pupil Teachers - - - - -	100 - -	100 - -
To three Masters for extra Teaching, and for performing the duties of Librarians - - - - -	30 - -	30 - -
For delivering Lectures, and giving Instruction to Boys in Marine Surveying - - - - -	110 - -	110 - -
Q.—SALARIES and ALLOWANCES, GREENWICH SCHOOL - - - - - } £.	3,684 - -	3,630 - -
Lodging-money to Masters not provided with Apartments -	394 - -	394 - -
Rates and Taxes - - - - -	10 - -	10 - -
R.—RENTS, RATES, and TAXES, GREENWICH SCHOOL - - - - - } £.	404 - -	404 - -
S.—Lighting the School with Gas - - - - -	180 - -	250 - -
Lessons in Drawing - - - - -	45 - -	45 - -
Monitorial Allowances to Pupil Teachers, and for Instruction of the Boys in French - - - - -	63 - -	63 - -
Books and Stationery - - - - -	500 - -	800 - -
Library - - - - -	60 - -	60 - -
Musical Instruments - - - - -	60 - -	60 - -
Washing - - - - -	900 - -	900 - -
Funerals - - - - -	25 - -	25 - -
Postage, Advertisements, Expense of sending Boys to their Homes and to H.M. Ships, and other Miscellaneous Expenses - - - - -	133 - -	133 - -
T.—CONTINGENCIES, GREENWICH SCHOOL - £.	1,786 - -	2,086 - -
Total Salaried Establishment - - - £.	6,054 - -	6,370 - -

* In addition to Half-pay.

GREENWICH HOSPITAL— <i>continued</i> . SALARIED ESTABLISHMENT— <i>continued</i> . U.—WAGES :	REQUIRED for the Service of the Year 1868-69.	LAST VOTE for the Financial Year 1867-68.
	£. s. d.	£. s. d.
For the wages of Drill-masters, Band-master, Tailors, Cooks, Engineers and Stokers for Lavatories and Kitchen, Nurses, Laundresses, Seamstresses, Labourers and others - £.	3,472 - -	3,519 - -
V.—Repairs and Maintenance of Buildings - - - £.	1,180 - -	2,200 - -
W.—Provisions, Clothing, Bedding and Stores of all } kinds - - - - - } £.	11,311 - -	12,811 - -
X.—Medicines and Surgical Instruments - - - £.	100 - -	100 - -
Y.—Superannuation Allowances to Masters, Nurses and } others - - - - - } £.	335 - -	335 - -
Number and Description of Pensioners paid out of the above Sum :		
2 Masters.		
4 Nurses.		
1 Laundress.		
1 Assistant Laundress.		
8		
TOTAL GREENWICH SCHOOL - - - £.	22,452 - -	25,335 - -
TOTAL OF THE WHOLE - - - - £.	127,608 - -	128,635 - -

The whole Charge amounts to the sum of One Hundred and Twenty-seven
Thousand Six Hundred and Eight Pounds.

Admiralty, }
13 February 1868. }

H. CORRY.

C. DU CANE.

GREENWICH HOSPITAL.

ESTIMATE

FOR

GREENWICH HOSPITAL AND
SCHOOL,

FOR THE YEAR 1868-69.

Ordered, by The House of Commons, to be Printed,
17 February 1868.

75.

Under 1 oz.

N A V Y.

STATEMENT
OF
EXCESS OF EXPENDITURE
FOR HER MAJESTY'S NAVY,
FOR THE YEAR 1866-67.

Required to be Voted, in order to defray the Excess of the	}	£.	s.	d.
Naval Expenditure beyond the ordinary Grants for the				
Year ended 31st March 1867, as shown on the Annual		90,619	13	9
Account of the Naval Receipt and Expenditure for that				
Year - - - - -				

Ninety Thousand Six Hundred and Nineteen Pounds Thirteen Shillings
and Nine Pence.

Admiralty, }
13 March 1868. }

H. CORRY.

C. DU CANE.

NAVY.

STATEMENT

OF

EXCESS OF EXPENDITURE
FOR HER MAJESTY'S NAVY,

For the Year 1866-67.

(Presented to Parliament by Her Majesty's Command.)

*Ordered, by The House of Commons, to be Printed,
16 March 1868.*

NAVAL RECEIPT AND EXPENDITURE.

1866-67.

APPROPRIATION ACCOUNT

OF

THE MONEYS EXPENDED FOR NAVY SERVICES,

In the Year ended the 31st March 1867;

WITH

THE REPORT OF THE COMPTROLLER AND AUDITOR GENERAL THEREON.

(Presented in pursuance of Act 29 & 30 Vict. c. 39, s. 22.)

*Ordered, by The House of Commons, to be Printed,
17 February 1868.*

AN APPROPRIATION ACCOUNT, exhibiting the Amount appropriated by Parliament for NAVY course of Payment within the same Period; prepared

The unappropriated Balance of 187,923 *l.* 13 *s.*, shown on the Account of Naval Receipt and Expenditure for the Financial Year ended the 31st March 1866, has been withdrawn by the Lords of the Treasury from the Naval Balance at the Exchequer, agreeably with the arrangement approved of by their Lordships, as signified by Mr. G. A. Hamilton's Letter of the 29th March 1867, an attested Copy of which is annexed.

To AMOUNT GRANTED FOR NAVAL SERVICES FOR THE YEAR 1866-67, per Act 29 & 30 Vict. c. 91, under the following Heads: viz.		£.	s.	d.	£.	s.	d.
Vote No. 1. Wages to Seamen and Marines	- - - - -	2,862,704	-	-			
2. Victuals and Clothing for ditto	- - - - -	1,235,188	-	-			
3. Admiralty Office	- - - - -	173,655	-	-			
4. Coast Guard Service, Royal Naval Coast Volunteers, and Royal Naval Reserve	- - - - -	274,119	-	-			
5. Scientific Branch	- - - - -	63,958	-	-			
6. Dockyards and Naval Yards at Home and Abroad	- - - - -	1,368,971	-	-			
7. Victualling Yards and Transport Establishments at Home and Abroad	- - - - -	85,624	-	-			
8. Medical Establishments at Home and Abroad	- - - - -	57,368	-	-			
9. Marine Divisions	- - - - -	15,550	-	-			
10. { Section I. Naval Stores for the Building, Repair, and Outfit of the Fleet and Coast Guard	- - - - -	1,003,501	-	-			
{ Section II. Steam Machinery, and Ships built by Contract	- - - - -	318,000	-	-			
11. New Works, Buildings, Machinery, and Repairs	- - - - -	892,865	-	-			
12. Medicines and Medical Stores	- - - - -	75,664	-	-			
13. Martial Law and Law Charges	- - - - -	20,605	-	-			
14. Miscellaneous Services	- - - - -	105,800	-	-			
15. Half Pay, Reserved Half Pay, and Retired Pay to Officers of the Navy and Royal Marines	- - - - -	689,052	-	-			
16. { Section I. Military Pensions and Allowances	- - - - -	528,904	-	-			
{ Section II. Civil Pensions and Allowances	- - - - -	213,837	-	-			
17. Army Department (Conveyance of Troops)	- - - - -	402,788	-	-			
To Amount granted on Supplementary Estimate for the year 1866-67, to defray the charge for altering and improving the system of Retirement of Officers of the Royal Navy, per Act 29 & 30 Vict. c. 91, under the following Head of the Annual Estimates, viz.:							10,888,153 - -
Vote No. 15. Half Pay, Reserved Half Pay, and Retired Pay to Officers of the Navy and Royal Marines					- - - - -		12,656 - -
To Amount granted on Supplementary Estimate for the year 1866-67, to defray the Charge for increasing the Pay and Allowances to Medical Officers of the Royal Navy, per Act 29 & 30 Vict. c. 91, under the following Heads of the Annual Estimates, viz.:							
Vote No. 1. Wages to Seamen and Marines					£.	s.	d.
8. Medical Establishments at Home and Abroad					-	-	-
14. Miscellaneous Services					150	-	-
					-	-	5,926 - -
To Amount granted on Supplementary Estimate for the year 1866-67, to defray the charge for the completion of Her Majesty's Ship Northumberland, per Act 29 & 30 Vict. c. 91, under the following Heads of the Annual Estimates, viz.:							
Vote No. 6. Dockyards and Naval Yards at Home and Abroad					£.	s.	d.
10. Section II. Steam Machinery, and Ships built by contract					8,000	-	-
					-	-	18,000 - -
To Amount granted on Supplementary Estimate for the year 1866-67, to defray the charge for an Instalment on a Ship to be built on the design of Captain Cowper Coles, per Act 29 & 30 Vict. c. 91, under the following Head of the Annual Estimates, viz.:							
Vote No. 10. Section II. Steam Machinery, and Ships built by contract					- - - - -		10,000 - -
To Balance, being the Excess of Expenditure beyond the Ordinary Navy Grants for the year 1866-67, to be provided for					- - - - -		90,619 13 9
					£.		10,525,354 13 9
Greenwich Hospital					- - - - -		125,367 - -

SERVICES of the Financial Year ended the 31st March 1867, and the Sums which actually came in in pursuance of Act 29 and 30 Vict. c. 39, s. 22.

Votes.					EXPENDITURE, in 1866-67.			GRANTS, (including Supplementary Estimates).			
Nos.		NAVY EFFECTIVE SERVICES :			£.	s.	d.	£.	s.	d.	
1		BY Wages to Seamen and Marines - - - - -			2,851,378	1	1	2,866,559	-	-	
2		" Victuals and Clothing for ditto - - - - -			1,215,973	15	2	1,235,188	-	-	
3		" Admiralty Office - - - - -			173,134	10	11	173,655	-	-	
4		" Coast Guard Service, Royal Naval Coast Volunteers, and Royal Naval Reserve -			244,030	-	10	274,119	-	-	
5		" Scientific Branch - - - - -			58,585	3	10	63,958	-	-	
6		" Dockyards and Naval Yards at Home and Abroad - - - - -			1,387,768	6	9	1,376,971	-	-	
7		" Victualling Yards and Transport Establishments at Home and Abroad - -			84,367	-	3	85,624	-	-	
8		" Medical Establishments at Home and Abroad - - - - -			58,438	11	5	59,289	-	-	
9		" Marine Divisions - - - - -			16,039	6	11	15,550	-	-	
10	{	" Section I. Naval Stores for the Building, Repair, and Outfit of the Fleet and Coast Guard - - - - -			1,072,418	1	10	1,003,501	-	-	
		" Section II. Steam Machinery and Ships built by Contract - - - - -			369,742	8	11	338,000	-	-	
11		" New Works, Buildings, Machinery, and Repairs - - - - -			768,904	5	10	892,865	-	-	
12		" Medicines and Medical Stores - - - - -			83,682	-	11	75,664	-	-	
13		" Martial Law and Law Charges - - - - -			18,157	19	2	20,605	-	-	
14		" Miscellaneous Services - - - - -			124,097	11	5	105,950	-	-	
NAVY NON-EFFECTIVE SERVICES :											
15		BY Half Pay, Reserved Half Pay, and Retired Pay to Officers of the Navy and Royal Marines - - - - -			689,247	16	5	701,708	-	-	
16	{	" Section I. Military Pensions and Allowances - - - - -			520,320	10	6	528,904	-	-	
		" Section II. Civil Pensions and Allowances - - - - -			206,858	3	6	213,837	-	-	
					£.	9,943,143	15	8	10,031,947	-	-
FOR THE SERVICE OF OTHER DEPARTMENTS :											
17		BY Army Department (Conveyance of Troops) - - - - -			581,191	4	-	402,788	-	-	
					£.	10,524,274	19	8	10,434,735	-	-
BY Amount written off as Irrecoverable, being the Balances due from sundry persons - - - - -					1,079	14	1	-	-	-	
					£.	10,525,354	13	9	10,434,735	-	-
BY Greenwich Hospital - - - - -					115,445	8	7	125,367	-	-	
" Balance of Vote unappropriated - - - - -					9,921	11	5	-	-	-	
					£.	125,367	-	-	125,367	-	-

Wide Causes of the Excesses and Surpluses on the other side

Vide Causes of the Excesses and Surpluses on the other side

(signed) *J. Beeby,*
Accountant General of the Navy.

I do hereby certify, that this Account, transmitted to me in pursuance of the 22nd section of the 29 & 30 Vict. c. 30, has been examined by Officers under my direction; and that, subject to the observations contained in my Report of the 15th instant, the above is a correct statement of the Receipt and Expenditure for Navy Services, for the year ended 31st March 1867, as compared with the Account Books and Vouchers, and other documents from which the Books are prepared.

Dated this 15th day of January 1868.

Examined,
H. T. D. Bathurst, Inspector.

Wm. Dunbar,
Comptroller General of the receipt and issue of Her Majesty's Exchequer,
and Auditor General of Public Accounts.

My Lord,

Treasury Chambers, 29 March 1867.

I AM commanded by the Lords Commissioners of Her Majesty's Treasury to acquaint your Lordship, for the information of the Lords Commissioners of the Admiralty, that the sum of 187,923 l. 13 s. has been surrendered to the Exchequer, out of the Votes for Naval Services for 1866-67.

The Secretary to the Admiralty.

I have, &c.
(signed) *Geo. A. Hamilton.*

Note.—Affording explanations of the degree to which the Account of the Naval Receipt and Expenditure, for the Financial Year 1866-67, has been affected by the rectification of errors or omissions in the Accounts of previous years, discovered since the closing of such Accounts; inserted in pursuance of the Treasury Letter, dated 30th April 1864.

VOTE.	DEBITS.			CREDITS.		
	£.	s.	d.	£.	s.	d.
No. 1. Wages to Seamen and Marines - - - - -	4,275	2	6	—		
2. Victuals and Clothing for ditto - - - - -	1,222	4	7	—		
4. Coast Guard Service, Royal Naval Coast Volunteers, and Royal Naval Reserve - - - - -	81	9	6	—		
6. Dockyards and Naval Yards at Home and Abroad - - - - -	689	19	11	—		
7. Victualling Yards and Transport Establishments at Home and Abroad - - - - -	121	1	8	—		
8. Medical Establishments at Home and Abroad - - - - -	11	18	8	—		
10. { Section I. Naval Stores for the Building, Repair, and Outfit of the Fleet - - - - -	-	-	-	371	6	8
{ Section II. Steam Machinery, and Ships built by Contract - - - - -	1,314	8	8	—		
11. New Works, Buildings, Machinery, and Repairs - - - - -	-	-	-	466	17	3
12. Medicines and Medical Stores - - - - -	12	19	2	—		
14. Miscellaneous Services - - - - -	161	9	10	—		
16. Section I. Military Pensions and Allowances - - - - -	-	-	-	31	8	1
17. Army Department (Conveyance of Troops) - - - - -	90	2	3	—		
Balances Irrecoverable - - - - -	1,030	1	3	—		
£.	9,010	18	-	869	12	-
	869	12	-			
Net Debit relating to Prior Years - - - £.	8,141	6	-			

The above Debits and Credits consist of payments through Cash Accounts not received in time to be included in the Account for the year to which they relate; of suspensions and disallowances removed subsequently to closing the Accounts for the year in which the payments, if correctly vouched, would have been charged; and of adjustments in the Accounts of previous years, subsequent to the closing of such Accounts.

Memorandum.—Under the re-arrangement of the Navy Estimates, as explained in the memorandum of proposed changes in the arrangement of the Navy Estimates (Parliamentary Paper, dated 3rd March 1865, No. 102), provision was made for the first time in the Navy Estimates for 1866-67 for the pay, allowances, victuals, coals, and medicines of Her Majesty's troop ships, under Vote No. 17, Army Department (Conveyance of Troops), which had hitherto been included in Votes Nos. 1, 2, 10, and 12 respectively.

As it has been found impracticable to keep an account of the actual payments for wages to the crews of Her Majesty's troop ships, for services performed in those vessels, distinct from the payments for wages to Her Majesty's ships generally through all the varied channels by which this class of Naval Expenditure (Sea Wages) is brought to account, the amount of the wages and allowances of petty officers, seamen, marines, and boys appearing upon the balance sheets of Her Majesty's troop ships for the year 1866 has been taken and posted as the Expenditure for that Service for 1866-67, and is included in the foregoing account under Vote No. 17.

(signed) *J. Beeby,*
Accountant General of the Navy.

EXPLANATIONS of the CAUSES of the EXCESSES and SURPLUSES on the
preceding Account.

VOTE No. 1.

WAGES to SEAMEN and MARINES (Surplus) - - £. 15,180 18 11

Caused by the number of Seamen, Boys, and Marines serving Afloat having been, on the average of the year, less than that for which provision was made, which, however, has been reduced in consequence of the number of Marines on Shore having been greater than was estimated.

VOTE No. 2.

VICTUALS and CLOTHING for SEAMEN, &c. (Surplus) - £. 19,214 4 10

This surplus is occasioned by the Credits from other Branches of the Naval Service for supplies of Seamen's Clothing and Bedding having been larger than were anticipated when the Estimate was framed, and by the Contractors for Clothing having failed in some instances to make their deliveries in time to admit of payment to the extent provided for within the Financial Year.

VOTE No. 3.

ADMIRALTY OFFICE (Surplus) - - - - £. 520 9 1

This surplus is occasioned by Deaths and Removals, and from the provision taken for the employment of Temporary Clerks and Writers under the New Regulations having proved to be in excess of the requirements of the Service. The surplus which would have been thus occasioned is, however, reduced by an excess arising from increased Expenditure, as compared with previous years, for Travelling Expenses of Officers of the Admiralty Department more frequently visiting the Dockyards in connection with the Works and Expenditure at those Establishments.

VOTE No. 4.

COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, }
and ROYAL NAVAL RESERVE (Surplus) - - - - } £. 30,088 19 2

This surplus is occasioned by the number of Men of the Royal Naval Reserve who have claimed retainers and presented themselves for drill having fallen short of the number estimated for; by the amount paid to Civilians on the Coast Guard Establishments on Shore having been less than was provided for, owing to vacancies caused by retirement having been filled up by men borne on Ships' Books; and by diminished payments for Rent and Lodging Allowances consequent on the further occupation of Public Buildings.

VOTE No. 5.

SCIENTIFIC BRANCH (Surplus) - - - - £. 5,372 16 2

This surplus is caused by the partial suspension of the West India Survey during the year; by the employment of fewer surveying Officers than were provided for; by the demand for Charts by Foreign Governments and by the Public having been less than was anticipated; and by no Claim having been made by the Science and Art Department for the Fees for Students at the School of Naval Architecture.

VOTE No. 6.

DOCKYARDS and NAVAL YARDS at HOME AND ABROAD (Excess) £. 10,797 6 9

This excess is caused by the expenditure for Wages at Devonport Dockyard having been more than the amount provided to meet the requirements of the Channel Squadron, for which the Treasury Sanction was given by Letter of 7th January 1867 to the extent of 2,000 £; by the payments to Contractors employed in breaking up Old Ships having been greater than provided for, the Estimate being based on previous year's Expenditure; by the absence of Officers of Naval Establishments Abroad, owing to sickness and other causes, and the consequent employment of Clerks paid for acting as substitutes; and by the amount provided for Writers at Hong Kong having been insufficient to meet the exigencies of the Service.

VOTE No. 7.

VICTUALLING YARDS and TRANSPORT ESTABLISHMENTS at }
HOME and ABROAD (Surplus) - - - - } £. 1,256 19 9

This surplus arises from the employment of a less number of Workmen than was provided for, principally in the Malta Steam Bakery, the casualties of the Service not requiring the full numbers estimated for; and from the expenditure on account of the Police Force employed in the Victualling Establishments at Home having been less than provided for, the Commissioners of Police not having made payments for Clothing relating to the year 1866-67, owing, it is understood, to the default of Contractors to make deliveries in proper time.

VOTE No. 8.

MEDICAL ESTABLISHMENTS AT HOME AND ABROAD (Surplus) £. 850 8 7

This surplus is occasioned by fewer Nurses having been required at Malta Hospital, the number of Patients having been less than in previous years; and by fewer Medical Officers having been employed at Hong Kong Hospital than was provided for.

VOTE No. 9.

MARINE DIVISIONS (Excess) - - - - - £. 489 6 11

This excess arises from additional expenditure incurred for lighting Chatham and Eastney Barracks with Gas, consequent upon the progress of the Works, and from the deficiency of accommodation at those Barracks which led to increased payments of Lodging Allowances to Officers.

VOTE No. 10 (Section I.)

NAVAL STORES FOR THE BUILDING, REPAIR, AND OUTFIT	}	£. 68,917 1 10
OF THE FLEET AND COASTGUARD (Excess) - - - - -		

The aggregate excess on the Vote is caused to the extent of 35,000 *l.* by the payments for a larger proportion of Dantzic Deck Deals than estimated as likely to be imported, and by greater supplies of Miscellaneous Stores under numerous Contracts being required, from various causes relating to the equipment of Ships and the Service at Sea; also, by a deficiency to the extent of 20,000 *l.* in the amount credited to Vote 10, for Coals for Her Majesty's Troop Ships, provided for under Vote 17; and by the non-delivery, during the previous financial year, of a large part of the Iron Plates which have been paid for in the year 1866-67.

VOTE No. 10 (Section II.)

STEAM MACHINERY and SHIPS BUILT BY CONTRACT (Excess) -	£. 31,742 8 11
--	--------------------

This excess is caused by the expenditure incurred for the completion of the "Northumberland" having been greater than was provided for, the contribution of the Millwall Iron Company towards that expenditure having been paid into the Exchequer as a Naval Extra Receipt; by payments on account of the "Valiant," "Minotaur," and "Agincourt," made this year instead of in 1865-66; and by expenditure incurred in the repairs of Ships at other than Her Majesty's Dockyards, chiefly Abroad, having exceeded the provision for the same, and which could not be ascertained until the accounts for the year were made up. This excess is reduced by the amount voted for a Ship to be built on the design of Captain Coles not having been expended, owing to that Ship, the "Captain," not having been sufficiently advanced to admit of an instalment being paid by the 31st March 1867.

VOTE No. 11.

NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS (Surplus)	£. 123,960 14 2
--	---------------------

The surplus on this Vote has mainly arisen in consequence of the delay in the preliminary arrangements connected with the Contract Works for the Extension of the Dockyards at Chatham and Portsmouth, which surplus has been reduced by excesses upon the items taken for the Extension of the Great Harbour at Malta, and for constructing the Floating Dock for Bermuda which were sanctioned by Treasury Letter of 9th March 1867.

VOTE No. 12.

MEDICINES AND MEDICAL STORES (Excess) -	-	£. 8,018 - 11
---	---	-------------------

This excess is caused by the increased Prices of Provisions, Coals, Bedding, &c., Medical Comforts and Medicines, as compared with those of previous years, and by additional expenses incurred for Sick Quarters in China over the amount provided for.

VOTE No. 13.

MARTIAL LAW AND LAW CHARGES (Surplus) -	-	£. 2,447 - 10
---	---	-------------------

This surplus is caused by diminished Law Charges, as compared with the average expenditure of previous years, on which the Estimate was based, after abating the expenditure on account of Malta Naval Prison unprovided for in the Estimates.

VOTE No. 14.

MISCELLANEOUS SERVICES (Excess) - - - £. 18,147 11 5

This excess arises from the claims for Passages of Officers, &c., chiefly to and from the East India, China, and West India Stations, having been more numerous than were anticipated on preparing the Estimate; from more having been paid for increased Public Advertisements than was provided for in the Estimates, consequent upon greater publicity being now given to advertizing Public Contracts; from the expenditure for Lodging Allowances to Officers compelled to reside on shore; and for Gratuities for Wounds and Injuries, and to Persons discharged from the service not entitled to Pensions, and for special services, having been greater than was provided for in the Estimate which was based on the average payments of previous years.

VOTE No. 15.

HALF PAY, RESERVED HALF PAY, AND RETIRED PAY TO } £. 12,460 3 7
OFFICERS OF THE NAVY AND ROYAL MARINES (Surplus) }

This surplus is occasioned by a less number of Officers having been placed on Half Pay than was provided for when the Estimate was framed.

VOTE No. 16 (Section I).

MILITARY PENSIONS AND ALLOWANCES (Surplus) - £. 8,583 9 6

This surplus is caused by the average number of Pensioners, through casualties, having been less than the number upon which the Estimate was framed, and by Pensions unclaimed. The surplus which would have appeared on this Vote is, however, reduced by an excess over the amount provided for Greenwich Out-pensioners, occasioned by a large number of Pensioners having reverted to their Naval Out-pensions in October 1865, under the new regulations for the management of Greenwich Hospital, but for which number 15*l.* a head a year will be paid into the Exchequer out of the funds of Greenwich Hospital.

VOTE No. 16 (Section II).

CIVIL PENSIONS AND ALLOWANCES (Surplus) - £. 6,978 16 6

This surplus is occasioned by the average number of Pensioners, through casualties, having been less than the number upon which the Estimate was framed, and by Pensions unclaimed. This surplus has, however, been diminished by the excess of expenditure over the Vote for Pensions to Coast Guard, arising from greater numbers having been pensioned in the course of the year than were provided for.

VOTE No. 17.

ARMY DEPARTMENT (CONVEYANCE OF TROOPS) (Excess) £. 178,343 4 -

This excess is occasioned by the Re-inforcements of Troops in British North America; by the large movements of Troops between England and Ireland; by the removal of two Regiments from Hong Kong, and the Reliefs consequent thereon at the Cape of Good Hope; and by larger inter-colonial movements of Troops and Stores in New Zealand than were expected when the Estimate was prepared.

This excess would have been greater but for a saving upon the expenditure on account of Her Majesty's Troop Ship "Himalaya," owing to her not having been commissioned at the period estimated for.

BALANCES IRRECOVERABLE - - - - - £. 1,079 14 1

For balance due on the Cash Accounts of the Officer acting as Paymaster of Her Majesty's gunboat, "Cockchafer;" for a Debt due to the Crown on the cash account of the second master of Her Majesty's ship "Haughty;" for deficiencies in the Cash Accounts of the late Acting Paymaster of Her Majesty's ship "Leopard," who deserted; for Public Money lost on the occasion of the wreck of Her Majesty's ship "Griffon," and of the foundering of Her Majesty's ship "Amazon;" and for the Passage Money of a Consul at Tampico, who died on his way to England, found to be irrecoverable.

On the other hand, the Gross Charge upon this head for the year 1866-67, of 1,105 *l.* 2 *s.* 9 *d.*, has been reduced by a Credit amounting to 10 *l.* 8 *s.* 4 *d.*, a portion of the amount written off as irrecoverable, in the year 1865-66, on the cash account of the Assistant Paymaster in charge at Shanghai, now accounted for, and 15 *l.* 0 *s.* 4 *d.* Prize Money due to the late Assistant Paymaster of Her Majesty's ship "Ringdove," appropriated in part payment of the amount written off as irrecoverable in the year 1865-66.

N.B.—The temporary application of the sum of 226,915 *l.* 1 *s.* 1 *d.*, the aggregate surplus on Votes Nos. 1, 2, 3, 4, 5, 7, 8, 11, 13, 15, 16, Sections I. and II., in aid of the deficiencies on the Grants for the Services above-mentioned, has been sanctioned by Treasury Letter of the 28th November 1867, with reference to the Provisions of the 29th Clause of Act 29 & 30 Vict. c. 91.

GREENWICH HOSPITAL, Surplus - - - - - £. 9,921 11 5

The surplus on this Vote mainly arises from the average number of In-Pensioners borne having been only 368, whereas provision was taken in the Estimates for 1866-67 for a complement of 500 In-Pensioners. From the decrease, by deaths, of the Allowances to those Pensioners who elected to leave Greenwich Hospital in 1865, and from the Pensions to Flag and other Officers, not having been paid for the whole year. Also from the cost of the maintenance of the Boys in the School having been less than was provided for, and for a large claim for Clothing supplied in Lady Quarter, 1867, not having been paid until the present year.

MEMORANDUM.

THE Old Store and Extra Receipt Moneys for the Year 1866-67, amounting to 184,539 *l.* 19 *s.* 7 *d.* (as brought to account under the following detailed Heads), have been paid over to the Exchequer, in conformity with the Treasury Minute of 2nd May 1848, instead of being appropriated, as heretofore, to the Navy Estimates.

HEADS OF OLD STORE AND EXTRA RECEIPT MONEYS.	Amount of Old Store Money.	Amount of Extra Receipts.	TOTAL.	Vote of the Navy Estimates under which formerly Appropriated.
	£. s. d.	£. s. d.	£. s. d.	
Discharges of Seamen and Marines - - - -	- - -	4,027 1 9	4,126 12 3	No. 1.
Barrack Schools (Contributions towards Education) -	- - -	99 10 6		
Old Stores, Victualling (Sales) - - - - -	11,602 3 2	- - -	17,885 14 -	No. 2.
Old Seamen's Clothing, Marine Stores, &c. (Sales) -	6,283 10 10	- - -		
Sale of Charts - - - - -	- - -	4,156 3 11	4,156 3 11	No. 5.
Barrack Rents (Rents of Canteens and Shops) - -	- - -	97 6 6	97 6 6	No. 9.
Old Stores, Naval (Sales) - - - - -	59,126 11 -	- - -	148,214 7 2	No. 10.
Proceeds of Sale of Old Ships - - - - -	52,380 19 8	- - -		
Sale of Ships - - - - -	- - -	9,061 11 6		
Per-centage on Cabin and Superintendents' Furniture, for its use - - - - -	- - -	1,881 10 10		
Repayments, Naval (Supplies of Stores) - - - -	- - -	25,763 14 2		
Old Stores, Medical (Sales) - - - - -	475 11 8	- - -	578 16 10	No. 12.
Repayments, Medical (Supplies of Stores) - - -	- - -	103 5 2		
Penalties, Fines, &c. - - - - -	- - -	3,035 15 -	7,758 15 4	No. 14.
Sale of Naval Property - - - - -	- - -	5 10 -		
Rents of Naval Premises - - - - -	- - -	4,227 11 11		
Per-centage on Port Admiral's Furniture, for its use -	- - -	376 - 11		
Miscellaneous Receipts - - - - -	- - -	113 17 6		
Old Stores, Army Service (Sales of Transport Stores) -	1,722 3 7	- - -	1,722 3 7	
Old Store Moneys - - -	£. 131,590 19 11		£. 184,539 19 7	
Extra Receipts - - -	- - - 52,948 19 8			

Examined,

H. T. D. Bathurst, Inspector.

(signed) J. Beeby,
Accountant General of the Navy.

REPORT of the COMPTROLLER and AUDITOR GENERAL upon the APPROPRIATION ACCOUNT of RECEIPT and EXPENDITURE for NAVY SERVICES, in the Year ended 31st March 1867, prepared and submitted for the information of the House of Commons, in pursuance of the 22nd and 32nd Sections of the Act 29 & 30 Vict. c. 39.

1. THE Account of the Receipt and Expenditure for Naval Services for the Year ended 31st March 1867, has been forwarded to me by the Lords Commissioners of the Admiralty, in pursuance of the 2nd Section of the Act 9 & 10 Vict. c. 92, and the 22nd Section of the Act 29 & 30 Vict. c. 39, upon which I have to make the following observations.

2. The total sum appropriated by the Act 29 & 30 Vict. c. 91, to Naval Services in the year 1866-67, was 10,434,735 *l.*, and the Total Expenditure in that year is shown by the accompanying Account to have been 10,525,354 *l.* 13 *s.* 9 *d.*

3. A Statement of the Amounts by which the Expenditure has fallen short of or exceeded the several Votes will be found in the Statement A. submitted with this Report.

4. The deficiency on certain grants for which provision will have to be made by Parliament, appears to be 317,534 *l.* 14 *s.* 10 *d.* The surplus of 226,915 *l.* 1 *s.* 1 *d.* on other grants has been temporarily applied in diminution of the excess, under the authority of the Lords Commissioners of the Treasury, in accordance with the terms of the Act 29 & 30 Vict. c. 91.

5. The amount of old store and extra receipt moneys, as shown in the Memorandum attached to the Account, has been paid into the Exchequer, as follows:—

	£.	s.	d.
August 1866	33,968	17	5
November „	106,832	4	6
February 1867	14,415	1	3
May „	29,325	16	5
	£.	184,539	19 7

6. In accordance with the directions of the Lords of the Treasury, a note has been appended to the Account, showing under each Vote the degree to which the Account of the Financial year has been affected by the rectification of errors or omissions in the Accounts of previous years.

7. A sum of 14,152 *l.* 3 *s.* 10 *d.* is charged in the Account under consideration, against Vote 4, Coast Guard Service, in respect of payments made by the Board of Works, Ireland, for Coast Guard Buildings. The Works and Repairs at these Buildings are done under the superintendence of the Commissioners of Public Works in Ireland, provision for the Expenditure having formerly been made in the Estimates for Civil Services. Such Expenditure was, however, transferred in the year 1866-67 from the Civil to the Navy Estimates. By an Admiralty Order, dated 7th July 1866, it appears that a statement rendered by the Board of Works of the payments made by them in respect of this service is to be accepted as a finally Audited Account, without the production of vouchers. I have therefore to notice that the sum of 14,152 *l.* 3 *s.* 10 *d.* has been charged against Navy Grants, without an examination of the vouchers substantiating the payments in the Accounting Department of the Admiralty.

8. There is also a charge against Vote 11, New Works, of 100 *l.*, being a gratuity to the Deputy Director of Works, for services in connection with Chatham Yard Extension, and directed by the Lords of the Admiralty to be charged to “New Works, Chatham, Extension of the Yard.” The Deputy Director of Works being an officer of the Admiralty, whose salary is provided for under Vote 3, Admiralty Office, and the work at Chatham apparently being, together with other works, under his superintendence as such officer, it appears that the additional salary or gratuity of 100 *l.* has been incorrectly charged to the Vote for the work at Chatham instead of to the Vote (No. 3, Admiralty Office) in which the salary of that officer is provided for; or, it should have been charged to Vote 14, which includes “Special Services,” if, as is contended by the Admiralty, the gratuity was awarded for services of a special character.

I submit herewith copies of the correspondence which has taken place on the subject.

9. With reference to the Memorandum on the Account as to the charge against Vote 17 for the Pay and Allowances to Crews of Troop Ships, copies of the correspondence between the Lords of the Treasury and this Department on the subject are submitted.

10. Copies of the Correspondence with the Admiralty respecting the amount of Expenditure relating to the Year 1866-67, not included in the Account, accompany this Report.

Exchequer and Audit Department,
15 January 1868.

(signed) *Wm. Dunbar*,
Comptroller General of the Receipt and Issue of
Her Majesty's Exchequer,
and Auditor General of Public Accounts.

(A.)

STATEMENT of the Amounts by which the NAVAL EXPENDITURE has fallen short of, or exceeded, the Sums VOTED for the Year 1866-67.

Number of Vote.	HEADS OF SERVICE.	EXPENDED.			
		Less than Voted.		More than Voted.	
		£.	s. d.	£.	s. d.
1	Wages to Seamen and Marines - - -	15,180	18 11	—	
2	Victuals and Clothing - - -	19,214	4 10	—	
3	Admiralty Office - - -	520	9 1	—	
4	Coast Guard Service, Royal Naval Reserve, &c.	30,088	19 2	—	
5	Scientific Branch - - -	5,372	16 2	—	
6	Naval Yards at Home and Abroad - -	—	—	10,797	6 9
7	Victualling Yards - ditto - - -	1,256	19 9	—	
8	Medical Establishments, ditto - - -	850	8 7	—	
9	Marine Divisions - - -	—	—	489	6 11
10	First Section: Naval Stores - - -	—	—	68,917	1 10
	Second Section: Steam Machinery and Ships built by Contract.	—	—	31,742	8 11
11	New Works and Repairs - - -	123,960	14 2	—	
12	Medicines and Medical Stores - - -	—	—	8,018	— 11
13	Martial Law and Law Charges - - -	2,447	— 10	—	
14	Miscellaneous Services - - -	—	—	18,147	11 5
15	Half Pay - - -	12,460	3 7	—	
16	First Section: Military Pensions and Allow- ances.	8,583	9 6	—	
	Second Section: Civil Pensions and Allowances	6,978	16 6	—	
17	Army Department: Conveyance of Troops -	—	—	178,343	4 -
	Balances Irrecoverable - - -	—	—	1,079	14 1
	£.	226,915	1 1	317,534	14 10

(1.)

Exchequer and Audit Department,
23 October 1867.

Sir,
I AM directed by the Comptroller and Auditor General to call your attention to an entry in the Navy Books, debiting Vote 11, "New Works, Chatham, Extension of the Yard," with 100*l.*, a gratuity to Mr. Scamp, Deputy Director of Works, and to request that he may be informed of the circumstances under which it is considered correct to charge a gratuity of this description against the Vote for New Works, &c.

W. G. Romaine, Esq., C.B.,
Admiralty.

I have, &c.
(signed) *C. L. Ryan*.

(2.)

Admiralty, Somerset House,
11 January 1868.

Sir,
WITH reference to the letters from the Exchequer and Audit Department, dated the 23rd October and 19th December last respectively, addressed to the Secretary of the Admiralty, calling attention to an entry in the Admiralty Books, debiting Vote No. 11, "New Works, &c.," with the sum of One hundred pounds, the amount of a gratuity to Mr. Scamp, Deputy Director of Works, and requesting to be informed of the circumstances under which it was considered correct to charge such a gratuity to the above
Vote,

£. 100.

Vote, I am directed by the Lords Commissioners of the Admiralty to inform you that, as the services performed by Mr. Scamp, for which he was awarded this gratuity, were of a special character in connection with the extension of Chatham Dockyard, their Lordships considered it correct in principle that the Vote taken for those works should bear this expense.

The Comptroller and Auditor General,
Somerset House.

I am, &c.
(signed) *J. Beeby*,
Accountant General of the Navy.

(3.)

Exchequer and Audit Department,
15 October 1867.

Sir,

I AM directed by the Comptroller and Auditor General to acknowledge the receipt of their Lordships' order of reference of the 30th ultimo, No. 15,084, on a letter from the Admiralty, of the 26th September, No. 15,084, herewith returned, as to the amount to be charged to Vote 17 for Wages to the crews of Her Majesty's Troop Ships; and in reply, to state that the Comptroller and Auditor General considers it is objectionable that a charge should be raised against a Vote, not in respect of sums which have come in course of payment, but upon an estimate of the amount due; and that should such course be adopted, he will feel it his duty to point out the same in reporting upon the Naval Account, under the provisions of the Act 29 & 30 Vict. c. 39.

Objections of a similar character have on previous occasions been adverted to by the late Commissioners of Audit in their reports on the Navy Accounts, the views of the Board being fully stated in their Report, No. 56, of the 30th January 1850, on the Navy Account for the year 1849-50.

It appears to the Comptroller and Auditor General, that if it is found impracticable to raise the charge against the Vote upon actual expenditure, the mode of framing the Estimate for Vote 17 should be assimilated to that adopted for the Coast Guard Vote, viz., to show in a memorandum the estimated amount required for Wages, which would be provided for in Vote 1, against which Vote the charge would be raised upon actual expenditure; the same information would be given upon the Estimates, and the Account would have the advantage of being based upon actual instead of estimated expenditure.

The Secretary to the Treasury,
&c. &c.

I have, &c.
(signed) *H. Treherne*.

(4.)

Sir,

Treasury Chambers, 23 November 1867.

I AM directed by the Lords Commissioners of her Majesty's Treasury to acquaint you, with reference to your letter of the 15th ultimo relative to the charge against Vote 17 for Wages to Crews of Troop Ships, that my Lords have consented to the arrangement proposed by the Admiralty Board in their letter to this Board of the 26th September, viz., that the wages and allowances of Petty Officers, &c. of Her Majesty's Troop Ships, cast out upon the balance sheets of such Troop Ships for the year 1866, be viewed and posted as the expenditure for that Service for the year 1866-67, on the understanding that the suggestion made by you with regard to the preparation of the Estimates is carried into effect in the Estimates for next and future years.

The Comptroller and Auditor General.

I am, &c.
(signed) *George Ward Hunt*.

(5.)

Exchequer and Audit Department,
2 December 1867.

Sir,

I AM directed by the Comptroller and Auditor General, with reference to the Account of Naval Receipts and Expenditure for the year 1866-67, transmitted in Lord Henry Lennox's letter of the 30th ultimo, to request that he may be furnished with a statement of the number and amount of the Accounts relating to the year 1866-67 received in office, which have not been examined and included in the Account rendered for that year; also a statement of the Accounts which had not been received in office when the Account for the year 1866-67 was closed.

W. G. Romaine Esq., C. B.
Admiralty.

I have, &c.
(signed) *C. L. Ryan*.

(6.)

Sir,

Admiralty, 14 January 1868.

IN reply to your letter of the 2nd ultimo, No. 1762, I am commanded by my Lords Commissioners of the Admiralty to acquaint you that all the Cash Accounts (5,004 in number) of Naval Accountants for the year 1866-67 received in office have been examined, and the Expenditure, amounting to 5,576,572 *l.* 9 *s.* 5 *d.*, has been included in the Parliamentary Naval Account for that year.

The following is a statement of the only Accounts which had not been received in office when the Account for 1866-67 was closed, viz. :—

	£.	s.	d.
Her Majesty's ship "Perseus," from the 1st to the 31st of March 1867 - - - - -	870	-	-
Account of officer in charge of Marine Detachment at Vancouver's Island, from 1st October 1866 to the 31st March 1867. (Received 17th December 1867) - - - - -	1,504	4	4
	£.	2,374	4 4

I am to add that every endeavour was made to obtain these Accounts in time to be included in the Annual Account, but without effect.

The Comptroller and Auditor General,
&c. &c. &c.

I am, &c.
(signed) *N. Houghton,*
Pro Secretary.

COPY of TREASURY MINUTE, dated 14th February 1868, on the foregoing Report of the Comptroller and Auditor General.

My Lords have before them the Appropriation Account of the Grants for Navy Services and Greenwich Hospital for the year 1866-67, with the Report of the Comptroller and Auditor General thereon.

The Navy Account exhibits a net excess of expenditure, beyond the total amount of the Grant, of 90,619 *l.* 13 *s.* 9 *d.*

The usual Resolutions will be submitted to the House of Commons for authorising the application (temporarily sanctioned by this Board) of the gross amount of Surpluses on certain Votes in aid of the gross amount of deficiencies under other heads, and a Vote for the net Excess of Expenditure will be submitted to the House.

Let the sum of 9,921 *l.* 11 *s.* 5 *d.* be surrendered as a saving on the Grant for Advances for Greenwich Hospital for 1866-67.

Acquaint the Paymaster General.

With regard to the observations in the Report of the Comptroller and Auditor General as to certain expenditure included in the Navy Account in respect of Coast Guard Buildings in Ireland (which service is conducted by the Commissioners of Public Works in Ireland), my Lords have previously had their attention called to the objections and difficulties necessarily arising from the divided administration of Grants of Parliament, and they have directed that the Estimates of the various Public Departments shall hereafter provide for such services only as are actually conducted and controlled by those Departments, in order that the Appropriation Accounts of the expenditure of the respective Grants may be prepared and rendered in conformity with the provisions of the Exchequer and Audit Departments Act.

The expenditure on account of the Coast Guard Stations in Ireland will therefore in future appear in the Estimate for Public Buildings in Ireland, and will be accounted for by the Commissioners of Public Works in Ireland.

Transmit copy of this Minute to the Admiralty, and to the Comptroller and Auditor General.

Let the Account and Report, and a copy of this Minute, be laid before the House of Commons.

NAVAL RECEIPT AND EXPENDITURE.

1866-67.

APPROPRIATION ACCOUNT of the
MONEYS Expended for NAVY SERVICES in
the Year ended the 31st March 1867; with
the REPORT of the Comptroller and Auditor
General thereon.

(Presented in pursuance of Act 29 & 30 Vict. c. 39, s. 22.)

Ordered, by The House of Commons, to be Printed,
17 February 1868.

N A V Y.

1866-1867.

STATEMENT of the SAVINGS and DEFICIENCIES upon the GRANTS for NAVY SERVICES, in the Year ended the 31st day of March 1867; showing all Cases in which the Navy Department has obtained the Sanction of the Treasury to Expenditure not provided for in the Grants for that Year, together with Copies of the Representations made to the Treasury by the Board of Admiralty; also the BALANCE SHEET, showing the Ledger Balances on the 30th September 1867, the Date on which the Annual Account of Naval Receipt and Expenditure for the Year 1866-67 was Closed.

(PRESENTED PURSUANT TO ACT 29 & 30 VICT. c. 91, s. 29.)

Ordered, by The House of Commons, to be Printed,
17 February 1868.

Exchequer and Audit Department,
Somerset House, London, W. C.
24 January 1868.

My Lords,

THE accompanying Statement of the Savings and Deficiencies upon the Grants for Naval Services in the year ended the 31st of March 1867, has been transmitted to me, in accordance with your Lordships' directions, as communicated to the Commissioners for Auditing the Public Accounts, in Mr. Peel's letter of the 21st of June 1864.

The Statement is accompanied by a Balance Sheet showing the Ledger Balances on the day on which the Account was closed.

The causes assigned for the several variations between the Sums estimated and the Sums expended, under the heads of Service, into which the general Votes are subdivided, do not admit of verification in this Department; but the amounts of the several Savings and Deficiencies, and Balances have been examined.

The observations contained in my Report of the 15th instant, for the information of the House of Commons, on the Account rendered under the 9 & 10 Vict. c. 92, apply equally to the Statement herewith transmitted.

I have, &c.
(signed) *Wm. Dunbar*,
Comptroller and Auditor General.

The Lords Commissioners
of Her Majesty's Treasury, &c. &c. &c.

NAVY.

STATEMENT of the SAVINGS and DEFICIENCIES upon the GRANTS for NAVY SERVICES, for the Year ended 31st March 1867.

GENERAL STATEMENT of the SUMS EXPENDED, compared with the SUMS GRANTED, under the following Votes, for NAVY SERVICES, in the Year ended 31st March 1867, showing the SAVING or DEFICIENCY upon each General Vote.

Number of Vote.	TITLE OF VOTE.	EXPENDITURE, 1866-67.			GRANTS (including Supplementary Estimates).			SAVINGS.			DEFICIENCIES.			Reference to Explanatory Statement.
		£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	
NAVY EFFECTIVE SERVICES:														
1	Wages to Seamen and Marines - - - -	2,851,378	1	1	2,866,539	-	-	15,180	18	11	-	-	-	5
2	Victuals and Clothing for ditto - - - -	1,215,973	15	2	1,235,188	-	-	19,214	4	10	-	-	-	6
3	Admiralty Office - - - -	173,134	10	11	173,655	-	-	520	9	1	-	-	-	8
4	Coast Guard Service, Royal Naval Coast Volun- teers, and Royal Naval Reserve - - - -	244,030	-	10	274,119	-	-	30,088	19	2	-	-	-	10
5	Scientific Branch - - - -	58,585	3	10	63,958	-	-	5,372	16	2	-	-	-	12
6	Dockyards and Naval Yards at Home and Abroad	1,387,768	6	9	1,376,971	-	-	-	-	-	10,797	6	9	14
7	Victualling Yards and Transport Establishments at Home and Abroad - - - -	84,367	-	3	85,624	-	-	1,256	19	9	-	-	-	18
8	Medical Establishments at Home and Abroad - - - -	58,438	11	5	59,289	-	-	850	8	7	-	-	-	20
9	Marine Divisions - - - -	16,039	6	11	15,550	-	-	-	-	-	489	6	11	22
10 {	Section I. Naval Stores for the Building, Repair, and Outfit of the Fleet and Coast Guard - - - -	1,072,418	1	10	1,003,501	-	-	-	-	-	68,917	1	10	22
10 {	Section II. Steam Machinery, and Ships built by Contract - - - -	369,742	8	11	338,000	-	-	-	-	-	31,742	8	11	24
11	New Works, Buildings, Machinery, and Repairs - - - -	763,904	-	10	892,865	-	-	123,960	14	2	-	-	-	26
12	Medicines and Medical Stores - - - -	83,682	-	11	75,664	-	-	-	-	-	8,018	-	11	64
13	Martial Law and Law Charges - - - -	18,157	19	2	20,605	-	-	2,447	-	10	-	-	-	64
14	Miscellaneous Services - - - -	124,097	11	5	105,950	-	-	-	-	-	18,147	11	5	65
NAVY NON-EFFECTIVE SERVICES:														
15	Half-Pay, reserved Half-Pay, and Retired Pay to Officers of the Navy and Royal Marines - - - -	689,247	16	5	701,708	-	-	12,460	3	7	-	-	-	68
16 {	Section I. Military Pensions and Allowances - - - -	520,320	10	6	528,904	-	-	8,583	9	6	-	-	-	70
16 {	Section II. Civil Pensions and Allowances - - - -	206,858	3	6	213,837	-	-	6,978	16	6	-	-	-	70
		£.			9,943,143	15	8	10,031,947	-	-	226,915	1	1	138,111 16 9
SERVICE OF OTHER DEPARTMENTS:														
17	Army Department (Conveyance of Troops - - - -	581,131	4	-	402,788	-	-	-	-	-	178,343	4	-	72
		£.			10,524,274	19	8	10,434,735	-	-	226,915	1	1	316,455 - 9
	Amount written off as irrecoverable - - - -	1,079	14	1	-	-	-	-	-	-	1,079	14	1	74
		£.			10,525,354	13	9	10,434,735	-	-	-	-	-	
TOTAL SAVINGS - - - - £.								226,915	1	1				
TOTAL DEFICIENCIES - - - - £.											317,534	14	10	
Greenwich Hospital - - - - - £.														
		£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	
		115,445	8	7	125,367	-	-	9,921	11	5	-	-	-	
SAVING - - - - £.								9,921	11	5				

The Treasury sanction was obtained for a portion of the above Excesses upon Votes Nos. 6, 11, 13, and 17. As the Excesses appearing upon the other Votes could only be known upon the Account for the Year being closed in November 1867, the Treasury sanction for the approval of such was applied for as usual upon the transmission of the Abstract Account for the Year to that Department, and has been given in Treasury Letter of 28th November 1867.

The temporary application of the sum of 226,915 *l.* 1 *s.* 1 *d.*, the aggregate surplus on Votes Nos. 1, 2, 3, 4, 5, 7, 8, 11, 13, 15, and 16 (Sections I. & II.), in aid of the Deficiencies on the Grants under Votes Nos. 6, 9, 10 (Section I.), 10 (Section II.), 12, 14, 17, and Balances Irrecoverable, has been sanctioned by Treasury Letter of 28th November 1867, with reference to the provisions of the 29th clause of Act 29 & 30 Vict. c. 91.

Copies of Applications made to the Treasury, and of Treasury replies, appended.

Admiralty,
31 December 1867.

J. Beeby,
Accountant General of the Navy.

The above Account examined and found correct, subject to the observations contained in the Report of the Comptroller and Auditor General, dated 15th inst., on the Account rendered under the 9 & 10 Vict. c. 92.

Exchequer and Audit Department,
24 January 1868.

H. T. D. Bathurst.

By order of the Comptroller and Auditor General,
Charles L. Ryan, Secretary.

EXPLANATORY STATEMENT of the SUMS EXPENDED, "More or Less" than those ESTIMATED together with the Causes of Variation between

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 1.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
WAGES TO SEAMEN AND MARINES:				
Wages to Seamen and Marines Afloat - - -	2,517,875 8 10	2,562,169 - -	40,683 7 10	- -
Apprehension of Deserters - - - - -	3,494 1 8			
Allowances to Masters in Charge of Warrant Officers' Stores.	116 1 8			
Expense of Raising Men, and Bounty to Seamen -	1,721 5 2	200 - -	- -	1,521 5 2
Subsistence of Commissioned and Staff Officers of Royal Marines on Shore.	64,124 5 5	262,658 - -	- -	24,081 2 9
Subsistence of Non-Commissioned Officers and Privates, Royal Marines, on Shore.	221,114 17 4			
Salaries, Marine Service - - - - -	1,500 - -			
Prizes for Good Shooting to Royal Marines - -	456 15 11	532 - -	75 4 1	- -
Recruiting Expenses, Royal Marines - - -	17,063 8 1	18,000 - -	936 11 11	- -
Colonial Pay and Field Allowance to Marines in Japan and San Juan.	1,371 7 4	2,000 - -	628 12 8	- -
Contingencies, Marine Service - - -	22,540 9 8	21,000 - -	- -	1,540 9 8
	£. 2,851,378 1 1	2,866,559 - -	42,323 16 6	27,142 17 7
Saving - - -	£. 15,180 18 11		£. 15,180 18 11	

under each of the Subdivisions of the VOTES included in the foregoing Statement, the EXPENDITURE and the ESTIMATE.

CAUSES OF VARIATION.

Surplus : caused by the Number of Seamen, Boys, and Marines having been, on the Average of the Year, less than that for which Provision was made.

Excess : arising principally from the Expenses for Examining and Conveying Men being greater than were anticipated ; and from the Expenses for Recruiting Boys for the Navy, by Recruiting Officers, and Chief Boatmen of the Coast Guard, not having been sufficiently provided for, the system having but just commenced when the Estimate was framed.

Excess : caused by the Number of Marines serving on Shore having been above the Establishment provided for.

Surplus : owing to a fewer Number of Marksmen having qualified for the 3rd Class than were provided for in the Estimate, in consequence of an alteration in the method of scoring, by which a higher standard of qualification is required.

Surplus : arising from it not having been found necessary to Recruit for the Marine Service to so great an extent as anticipated when the Estimate was framed.

Surplus : caused by the Payments for these Services having been limited almost entirely to San Juan.

Excess : caused principally by the Payments for Lodging Money to Non-Commissioned Officers and Privates, Royal Marines, having exceeded the Estimate.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.			ESTIMATE, 1866-67.			EXPENDITURE,			
							Less than Estimate.		More than Estimate.	
VOTE No. 2.										
VICTUALS AND CLOTHING FOR SEAMEN AND MARINES:	£. s. d.			£. s. d.			£. s. d.		£. s. d.	
Provisions received under Contract, Purchased, &c. -	641,581	7	9	663,769	-	-	22,187	12	3	-
Savings (Payments for Provisions not taken up) -	133,864	2	9	147,223	-	-	13,358	17	3	-
Allowances in lieu of Provisions and Fuel to Officers and Men borne on Ships' Books, but not victualled.	166,587	16	10	162,213	-	-	-	-	4,374	16 10
Lights and Culinary Fuel for Service Afloat - -	61,097	3	7	54,802	-	-	-	-	6,295	3 7
Allowances in lieu of Lights to Officers, &c. Afloat -	16,177	16	4	19,128	-	-	2,950	3	8	-
Mess Allowances (Advances to Officers) - - -	40,465	2	-	42,370	-	-	1,904	18	-	-
Officers' Mess Traps, Furniture, &c. - - -	13,660	4	2	10,000	-	-	-	-	3,660	4 2
Victualling Stores received under Contract, Pur- chased, &c.	35,126	16	7	29,750	-	-	-	-	5,376	16 7
Carried forward - - - £.	1,108,560	10	-	1,129,255	-	-	40,401	11	2	19,707 11 2

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

	£.	s.	d.
Gross surplus - - - - -	22,187	12	3
Deduct—Amount provided in detailed Estimate for Provisions received under Contract, &c., but included in credit of 22,680 <i>l.</i> deducted at the end of aggregate Estimate - - - - -	14,016	-	-
Leaving for explanation a surplus of - - - - - £.	8,171	12	3

which arises from the number of men victualled during the year being less than the number voted.

	£.	s.	d.
Gross surplus - - - - -	13,358	17	3
Deduct—Amount provided in detailed Estimate for "Savings," but included in credit of 22,680 <i>l.</i> deducted at the end of aggregate Estimate - - -	3,137	-	-
Leaving for explanation a surplus of - - - - - £.	10,221	17	3

which arises from the numbers victualled being less than voted, and from the men taking up a larger proportion of their allowance in kind than usual.

	£.	s.	d.
Excess - - - - -	4,374	16	10
Add—Amount provided in detailed Estimate for "Allowances in lieu of Provisions, &c.," but included in credit of 22,680 <i>l.</i> deducted at the end of aggregate Estimate - - - - -	1,797	-	-
Leaving for explanation a Gross Excess of - - - - - £.	6,171	16	10

which is caused by an increase in the number paid compensation in lieu of victualling.

Excess: resulting from an increase in the price of coals, and an increased consumption in iron-clads.

Surpluses: caused by the numbers drawing these allowances having been less than estimated, and by the amount provided in the detailed Estimate under these heads, but included in credit of 22,680 *l.* deducted at the end of aggregate Vote.

Excess: arising from the claims for Furniture supplied being larger than usual, and from a renewal of Mess Traps to several Ships over three years in commission.

Excess: caused by the exigencies of the Service having rendered larger purchases necessary than were estimated, and by higher prices having been paid for coals.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 2.				
VICTUALS AND CLOTHING FOR SEAMEN AND MARINES— <i>continued</i> .	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	1,108,560 10 -	1,129,255 - -	40,401 11 2	19,707 1 2
Freight, Lighterage, and other Charges on Provisions and Victualling Stores.	15,000 17 4	16,500 - -	1,409 2 8	- -
<i>Abate—</i>		1,145,755 - -		19,707 1 2
Allowances for Provisions, Fuel, &c., to Superin- tendents of Dockyards, &c., provided for under Vote No. 6 - - - £. 1,797				
Cost of Victualling Troop Ships, pro- vided for under Vote No. 17 - - £. 20,883				
	- - -	22,680 - -	- -	22,680 - -
TOTAL Provisions, &c. - - - £.	1,123,561 7 4	1,123,075 - -	41,900 13 10	42,387 1 2
Deficiency on Provisions, &c. - - - £.	£. 486 7 4		£. 486 7 4	
Seamen's Clothing, Soap, and Tobacco - - -	16,197 14 3	40,275 - -	24,077 5 9	- -
Marine Clothing and Appointments - - -	51,206 16 3	47,683 - -	- -	3,523 16 3
Allowances in lieu of Marine Clothing - - -	5,784 8 8	6,121 - -	336 11 4	- -
Marine Barrack Stores - - - - -	19,223 8 8	19,049 - -	- -	174 8 8
		113,128 - -	- -	3,698 4 11
<i>Abate—</i>		1,015 - -	- -	1,015 - -
Clothing to Crews of Troop Ships provided for under Vote No. 17.	- - -			
TOTAL Clothing - - - £.	92,412 7 10	112,113 - -	24,413 17 1	4,713 4 11
Saving on Clothing - - -	£. 19,700 12 2		£. 19,700 12 2	
£.	1,215,973 15 2	1,235,188 - -	66,314 10 11	47,100 6 1
Saving - - -	£. 19,214 4 10		£. 19,214 4 10	
VOTE No. 3.				
ADMIRALTY OFFICE:				
Salaries, Admiralty Office - - - - -	157,181 18 3	159,218 - -	2,036 1 9	- -
Wages, Admiralty Office - - - - -	3,715 12 11	2,637 - -	- -	78 12 11
Rents, Taxes, and Contingencies, Admiralty Office -	12,236 19 9	10,800 - -	- -	1,436 19 9
£.	173,134 10 11	173,655 - -	2,036 1 9	1,515 12 8
Saving - - -	£. 520 9 1		£. 520 9 1	

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued*.

CAUSES OF VARIATION.

Surplus: caused by the Conveyance of Supplies having been provided at less cost than had been contemplated.

Credit: the Credits for these Services are included in the several detailed items of the Vote, the principal portion being under the heads of "Pensions, &c.," "Savings," and "Allowances in lieu of Provisions," as there stated.

	£.	s.	d.
Gross Surplus - - - - -	24,077	5	9
Deduct,—Amount inserted in Detailed Estimate for Seamen's Clothing, &c., but deducted at the end of Aggregate Estimate - - - - -	1,015	-	-
Leaving for explanation a Surplus of - - - - - £.	23,062	5	9

caused by the contractors for clothing having failed, in some instances, to make their deliveries in time to admit of payment to the extent provided for within the financial year.

Excess: arising from a portion of the Supplies for the year 1865-66 not having been delivered in time to admit of payment being made in that year.

Surplus: owing to fewer Men having been Disembarked in 1866 with Clothing Money due to them than was anticipated.

Excess: caused by Increased Allowances of Fuel having been issued during very inclement weather.

Credit: the Credit for this Service is included under the detailed item of the Vote "Seamen's Clothing," as there stated.

Surplus: arising from Deaths and Removals, and from the provision taken for the employment of Temporary Clerks and Writers, under the new regulations, having proved to be in excess of the requirements of the Service.

Excess: caused by the Wages of a Binder transferred from the Stationery Office, not being provided for in the Estimates.

Excess: owing chiefly to greater Expenditure for Travelling Expenses, in consequence of Officers of the Admiralty Department more frequently visiting the Dockyards, in connection with the Works and Expenditure at those Establishments, and to Increased Assessment for Rates and Taxes as compared with previous years.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
VOTE No. 4.				
COAST GUARD SERVICE, ROYAL NAVAL COAST VOLUNTEERS, AND ROYAL NAVAL RESERVE:				
Salaries, Coast Guard Office - - - -	5,278 19 7	5,357 10 -	78 10 5	- -
Wages and Allowances, Coast Guard Office - -	72 2 6	59 - -	- -	13 2 6
Rents, Taxes, and Contingencies, Coast Guard Office	1,065 3 3	1,017 10 -	- -	47 13 3
Pay of Officers and Men, Coast Guard Establish- ments on Shore.	31,431 18 -	36,002 - -	4,570 2 -	- -
Rents, Rates, and Taxes, Coast Guard Establish- ments on Shore.	31,509 14 4	35,400 - -	3,890 5 8	- -
Contingencies, Coast Guard Establishments on Shore	20,864 2 6	28,098 - -	- -	2,766 2 6
Drill of the Coast Guard and Royal Naval Reserve -	3,981 8 9	4,150 - -	168 11 3	- -
Royal Naval Coast Volunteers - - - -	19,544 10 4	21,000 - -	1,455 9 8	- -
Royal Naval Reserve - - - - -	120,282 1 7	143,035 - -	22,752 18 5	- -
£.	244,030 - 10	274,119 - -	32,915 17 5	2,826 18 3
Saving - - -	£. 30,088 19 2		£. 30,088 19 2	

the Subdivisions of the Votes included in the foregoing Statement, &c.—continued.

CAUSES OF VARIATION.

Surplus : caused by Deaths and Removals.

Excess : caused by an Allowance granted to the Office Messenger for charge of Repositories, subsequently to the Estimate having been prepared.

Excess : arising from the Expenditure for Travelling Expenses having been greater than the average of the three preceding years upon which the Estimate was based.

Surplus : caused by the Vacancies occasioned by the retirement of Civilians having been filled up by Men borne on Ships' Books.

Surplus : caused by diminished Payments for Rent consequent on the further occupation of Public Buildings.

Excess : occasioned by the Expenditure for Travelling Charges having been greater than the Estimate, which was based on the average Expenditure of previous years, consequent on the several Stations being more frequently inspected.

Surplus : caused by the Expenditure for Drill and Erection of Batteries having been less than the Estimate, which was based on the Expenditure of previous years.

Surplus : caused by the further Reduction of the Force during the year.

Surplus : caused by a less Number of Men having presented themselves for Drill, and claimed Retainers, than were provided for.

EXPLANATORY STATEMENT of the Sums Expended, " More or Less " than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 5.				
SCIENTIFIC BRANCH.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Salaries, Royal Observatory - - - - -	2,646 16 -	2,647 - -	- 4 -	- - -
Contingencies, Royal Observatory - - - - -	1,878 4 5	1,745 - -	- - -	133 4 5
Observatory at the Cape of Good Hope - - -	1,802 14 -	1,674 - -	- - -	128 14 -
Nautical Almanack - - - - -	2,135 12 10	2,234 - -	98 7 2	- - -
Chronometers - - - - -	1,392 2 6	1,250 - -	- - -	142 2 6
Compass Department - - - - -	745 19 9	741 - -	- - -	4 19 9
Rewards, Experiments, &c., for Scientific Purposes -	591 7 10	500 - -	- - -	91 7 10
Director of Education for the Admiralty - - -	956 2 3	964 - -	7 17 9	- - -
School of Naval Architecture, and Maintenance of Students in the same.	730 1 -	1,255 - -	524 19 -	- - -
Royal United Service Institution - - - - -	300 - -	300 - -	- - -	- - -
Libraries and Museums at Haslar and Plymouth -	105 8 11	100 - -	- - -	5 8 11
Salaries and Wages, Hydrographical Department -	5,490 4 11	5,474 - -	- - -	16 4 11
Drawing, Engraving, Printing, and Mounting Charts	10,726 5 3	12,000 - -	1,273 14 9	- - -
Contingencies, Hydrographical Department - -	1,157 5 1	1,200 - -	42 14 11	- - -
Coast and other Surveys - - - - -	25,058 3 7	28,641 - -	3,582 16 5	- - -
Establishment for Scientific Education at Portsmouth	2,868 15 6	3,233 - -	364 4 6	- - -
£.	58,585 3 10	63,958 - -	5,894 18 6	522 2 4
Saving - - -	£. 5,372 16 2		£. 5,372 16 2	

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus. Fractional difference.

Excess: caused by the Repairs to the Buildings having cost more than estimated for.

Excess: caused by the Clerical Assistance in computing and copying the meridian work having exceeded the estimated cost.

Surplus: caused by fewer Computers having been employed than were provided for.

Excess: caused by the Repairs to Chronometers abroad, principally at Hong Kong, having been unusually large, owing to many ships being paid off and re-commissioned.

Excess. This is merely a fractional difference.

Excess: caused by the Expenditure having been greater than the average of previous years on which the Estimate was based.

Surplus: caused by the Payments for Travelling Expenses of the Director of Education having been less than were anticipated.

Surplus: owing to the Science and Art Department not having claimed the Amount due for Fees for Students.

Excess. This is merely the difference between an estimated and an actual expenditure.

Excess: arising from the Retirement of one of the Naval Assistants at a later period of the Year than was anticipated.

Surplus: caused by the Demand for Charts by Foreign Governments and by the Public having been less than was anticipated.

Surplus: arising from the Expenditure having fallen short of the Estimate, which is based upon the average of previous years.

Surplus: caused by the Partial Suspension of the West India Survey during the Year, and the Employment of fewer Surveying Officers than were provided for.

Surplus: caused by Deaths and Removals, and by less having been paid for Furniture, &c., than was provided for in the Estimate, based on the Expenditure of previous years.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE. 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,			
			Less than Estimate.		More than Estimate.	
VOTE No. 6.						
DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD.	£. s. d.	£. s. d.	£. s. d.	£. s. d.		
Salaries, Dockyards at Home - - - -	138,669 3 7	139,267 - -	597 16 5	-	-	
Rents, Rates, Taxes, Gas, and Water, Dockyards at Home.	13,971 7 8	14,471 - -	499 12 4	-	-	
Contingencies, Dockyards at Home - - -	4,688 12 3	4,936 - -	247 7 9	-	-	
Wages to Artificers, &c., Dockyards at Home - -	1,048,957 4 6	1,073,194 - -	*24,236 15 6	-	-	
Wages, Yard Service Afloat, Dockyards at Home -	17,939 14 5	17,995 - -	55 5 7	-	-	
Hire of Teams, Dockyards at Home - - -	10,039 11 9	10,158 - -	118 8 3	-	-	
Wages, Police Force (including general Superintendence), Dockyards at Home.	31,444 9 4	32,263 - -	818 10 8	-	-	
Wages, Artificers and Labourers breaking up Old Ships.	19,268 10 10	15,000 - -	-	-	4,268 10 10	
Extra Pay to Artificers, &c. of the Fleet at Home -	3,893 2 7	4,000 - -	106 17 5	-	-	
Survey Valuation of Stock at the several Yards at Home.	2,033 5 1	1,000 - -	-	-	1,033 5 1	
Salaries, Naval Yards Abroad - - - -	29,092 2 10	26,614 - -	-	-	2,478 2 10	
Rents, Rates, Taxes, Gas, and Water, Naval Yards Abroad.	2,977 14 10	2,690 - -	-	-	287 14 10	
Carried forward - - - £.	1,922,974 19 8	1,341,588 - -	26,680 13 11		8,067 13 7	

* Copy of Application made to Treasury, and

the Sub-divisions of the Votes including in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus: caused by Deaths and Removals.

Surplus: caused by less having been paid for Gas at Pembroke than was anticipated when the Estimates were framed.

Surplus: caused by a general reduction upon the Contingent Charges of the Establishments as based upon the Expenditure of previous years, the charge for Sweeping Chimneys having also been transferred to Vote No. 11.

	£.	s.	d.
Surplus; amount provided in detailed Estimate for "Wages," but included in credit of 28,777 l. deducted at the end of aggregate Estimate - - - -	28,132	-	-
Deduct—Surplus appearing on this account - - - -	24,236	15	6
Leaving for explanation an Excess of - - - - £.	3,895	4	6

caused by the Expenditure for Wages at Devonport Dockyard more than the amount provided to meet the requirements of the Channel Squadron, for which the Treasury Sanction was given by Letter of 7th January 1867, to the extent of 2,000 l.*

Surplus: this is merely the difference between an estimated and an actual Expenditure.

Surplus: caused by fewer Teams having been required at Pembroke than was anticipated when the Estimate was framed.

Surplus: arising from the Commissioners of Police not having made Payments for Clothing relating to the Year 1866-67, owing, it is understood, to the default of the Contractors to make deliveries in proper time.

Excess: caused by the Payments to Contractors employed in breaking up Old Ships having been greater than provided for, the Estimate being based on previous years' Expenditure.

Surplus: this is merely the difference between an estimated and an actual Expenditure.

Excess: owing to additional Surveys rendered necessary by a change of Storekeeper at Portsmouth.

Excess: caused by the appointment of Superintendents at the Cape and at Hong Kong who were entitled to higher Rates of Pay and Allowances than were provided for, and by Payments made to Clerks and others acting as Storekeepers at Halifax, Antigua, and Hong Kong, during the lengthened absence of the Storekeepers from sickness and other causes, and by the amount provided for Writers at Hong Kong, having been insufficient to meet the exigencies of the service.

Excess: owing to no provision having been made in the Estimates for Rates and Taxes at Gibraltar, and to increased Expenditure for Lodging Allowances at Hong Kong, and for Water at Halifax beyond the amount provided.

Treasury Reply appended (*see p. 16*).

EXPLANATORY STATEMENT of the Sums Expended "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 6— <i>continued</i> .	£. s. d.	£. s. d.	£. s. d.	£. s. d.
DOCKYARDS AND NAVAL YARDS AT HOME AND ABROAD— <i>continued</i> .				
Brought forward - - -	1,322,974 19 8	1,341,588 - -	26,680 13 11	8,067 13 7
Contingencies, Naval Yards Abroad - - -	1,079 18 1	1,180 - -	100 1 11	- - -
Wages, Police Force, Naval Yards Abroad - -	5,202 2 11	4,734 - -	- - -	468 2 11
Wages, Naval Yards Abroad - - - - -	44,721 2 10	45,113 - -	391 17 2	- - -
Wages, Yard Service Afloat (Naval Yards Abroad)	2,715 5 10	4,133 - -	1,417 14 2	- - -
Hire of Teams, Naval Yards Abroad - - -	416 17 4	- - -	- - -	416 17 4
Extra Pay to Artificers, &c., of the Fleet Abroad -	10,658 - 1	9,000 - -	- - -	1,658 - 1
	1,387,768 6 9	1,405,748 - -	28,590 7 2	10,610 13 11
Abate,—Labour at the several Dockyards, in Making and Repairing Yard Machinery, pro- vided for under Vote No. 11 - - - }	- - -	28,777 - -	- - -	28,777 - -
£.	1,387,768 6 9	1,376,971 - -	28,590 7 2	39,387 13 11
Deficiency - - -	£. 10,797 6 9		£. 10,797 6 9	

(A.)

Sir,

Admiralty, 1 January 1867.

THE casualties and expenses attending the change of armament for the Channel Fleet having been unexpectedly great, and having fallen principally on Devonport Yard, I am commanded by my Lords Commissioners of the Admiralty to request you will move the Lords Commissioners of Her Majesty's Treasury to sanction an Excess of 2,000 £. on the Wages Vote for the year; as if no Excess is allowed, a very considerable discharge of men must take place at Devonport Yard, to the great delay and detriment of the public service.

The Secretary of the Treasury.

I am, &c.
(signed Henry G. Lennox.

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus: caused by decreased Expenditure as compared with previous years for Postage and Contingent Expenses at Hong Kong.

Excess: caused by increased Expenditure for Police at Hong Kong over the amount provided.

	£.	s.	d.
Surplus: Amount provided in Detailed Estimate for Wages but included in credit of 28,777 <i>l.</i> deducted at the end of aggregate Estimate	-	-	-
Deduct: Surplus appearing on this Account	-	-	-
	645	-	-
	391	17	2
Leaving for Explanation an Excess of	£.	253	2 10

caused by the amount paid for Hired Labour at Hong Kong having been in Excess of the amount provided, in order to meet the exigencies of the Fleet; the Excess which would have been thus occasioned is however reduced by the requirements of the Fleet having necessitated the Employment of fewer Men at Malta and Bermuda.

Surplus: caused by the requirements for this Service having been less than anticipated.

Excess: no separate Provision having been taken for this Service this year; the employment of Teams being considered as a substitute for Manual Labour, provided for under the Item of "Wages to Artificers and Labourers."

Excess: caused by an increased amount having been paid to Artificers of the Fleet, chiefly on the North America, Pacific, and China Stations, in order to meet the exigencies of the Service.

Credit: the Credits for this Service are inserted in the several detailed Items of the Vote, the principal portion being under the Item of "Wages, Naval Yards at Home," as there stated.

(A.)

Sir,

Treasury Chambers, 7 January 1867.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to acquaint you, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 1st instant, that my Lords approve of the sum of 2,000 *l.*, being the expected Surplus on the Labour and Wages Vote for Devonport Dockyard, being temporarily defrayed out of Savings to be effected on the aggregate Votes.

E.

The Secretary to the Admiralty.

I am, &c.
(signed) *George Ward Hunt.*

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.			ESTIMATE, 1866-67.			EXPENDITURE,					
							Less than Estimate.			More than Estimate.		
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
VOTE No. 7.												
VICTUALLING YARDS AND TRANSPORT ESTABLISHMENTS AT HOME AND ABROAD:												
Salaries, Victualling Yards at Home - - -	19,152	19	3	19,056	-	-	-	-	-	96	19	3
Rents, Rates, Taxes, Gas, and Water, Victualling Yards at Home.	1,588	16	-	1,806	-	-	217	4	-	-	-	-
Contingencies, Victualling Yards at Home - -	632	16	10	642	-	-	9	3	2	-	-	-
Wages to Artificers, &c., Victualling Yards at Home	38,022	7	4	38,160	-	-	137	12	8	-	-	-
Wages, Victualling Yard Hoys, Victualling Yards at Home.	5,233	1	7	5,364	-	-	130	18	5	-	-	-
Wages to Police Force, Victualling Yards at Home -	4,087	17	6	4,361	-	-	273	2	6	-	-	-
Survey, Valuation of Stock in the Victualling Yards	386	6	6	100	-	-	-	-	-	286	6	6
Salaries, Victualling Yards Abroad - - - -	5,219	9	2	4,942	-	-	-	-	-	277	9	2
Rents, Rates, Taxes, Gas, and Water, Victualling Yards Abroad.	325	9	8	401	-	-	75	10	4	-	-	-
Contingencies, Victualling Yards Abroad - - -	269	4	6	219	-	-	-	-	-	50	4	6
Wages to Artificers, &c., Victualling Yards Abroad -	7,764	9	1	8,895	-	-	1,130	10	11	-	-	-
Salaries, Transport Establishments - - - -	878	12	8	929	-	-	50	7	4	-	-	-
Rents, Rates, Taxes, Gas, and Water, Transport Establishments.	248	14	-	266	-	-	17	6	-	-	-	-
Contingencies, Transport Establishments - - -	193	-	9	135	-	-	-	-	-	58	-	9
Wages to Artificers, Transport Establishments - -	363	15	5	348	-	-	-	-	-	15	15	5
£.	84,367	-	3	85,624	-	-	2,041	15	4	784	15	7
Saving - - -	£. 1,256 19 9						£. 1,256 19 9					

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Excess : caused by Two Officers being paid for the same period, owing to the Appointment of a Storekeeper from a Foreign Station, and the Employment of Writers during the absence of Clerks, sick, and on leave.

Surplus : owing to the Expenditure for Gas having been less at the Royal Victoria, and Royal William Yards, than the Estimate.

Surplus. This is merely the Difference between an estimated and an actual Expenditure.

Surplus. This is merely the Difference between an estimated and an actual Expenditure.

Surplus : owing to the "Plym," spare Tank Vessel, at the Royal William Yard, not having been required.

Surplus : arising from the Commissioners of Police not having made Payments for Clothing relating to the year 1866-67, owing, it is understood, to the default of the Contractors to make deliveries in proper time.

Excess : caused by additional Surveys at Deptford and Haulbowline, rendered necessary on change of Storekeepers.

Excess : caused by the requirements of the Service having necessitated the Employment, at Esquimalt, of Two Writers, not provided for in the Estimates.

Surplus : occasioned by the Expenditure for Gas at Malta and Halifax not having been so great as was provided for.

Excess : caused by the Expenditure for Advertisements, and Contingent Charges at the Cape of Good Hope, and at Malta, having exceeded the Estimate, and by insufficient provision having been made at Esquimalt for Contingent Expenses, that Establishment having been but recently formed.

Surplus : caused by the Employment of a less number of Workmen than were provided for, principally in the Malta Steam Bakery, the casualties of the Service not requiring the full numbers provided for.

Surplus : caused by the Leading Man of Storehouses having been placed on Day Pay and charged to "Wages."

Surplus : arising from diminished Expenditure for Rates and Taxes.

Excess : arising from increased Travelling Expenses at Deptford, in consequence of the large number of Hired Ships fitting for the Conveyance of Troops.

Excess : caused by the Leading Man of Storehouses having been paid Day Pay instead of "Salary," under which head provision was made.

EXPLANATORY STATEMENT of the Sums Expended, " More or Less " than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 8.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
MEDICAL ESTABLISHMENTS AT HOME AND ABROAD :				
Salaries, Medical Establishments at Home - -	13,086 4 -	13,100 10 -	14 6 -	- -
Rents, Rates, Taxes, Gas, and Water, Medical Establishments at Home.	1,438 12 11	1,593 10 -	154 17 1	- -
Contingencies, Medical Establishments at Home -	987 18 2	1,134 - -	146 1 10	- -
Wages, Medical Establishments at Home - - -	15,718 9 3	15,622 - -	- -	96 9 3
Wages to Police Force, Medical Establishments at Home.	2,151 5 4	1,877 - -	- -	274 5 4
Salaries, Medical Establishments Abroad - - -	8,126 7 8	8,547 17 6	421 9 10	- -
Rents, Rates, Taxes, Gas, and Water, Medical Establishments Abroad.	79 15 3	197 2 10	117 7 7	- -
Contingencies, Medical Establishments Abroad : -	316 18 4	349 19 8	33 1 4	- -
Wages, Medical Establishments Abroad - - -	4,667 17 -	5,100 - -	432 3 -	- -
Salaries, Marine Infirmaries - - - -	5,513 6 9	5,145 - -	- -	368 6 9
Rents, Rates, Taxes, Gas, and Water, Marine Infirmaries.	822 12 3	811 - -	- -	11 12 3
Contingencies, Marine Infirmaries - - - -	286 5 4	299 - -	12 14 8	- -
Wages, &c., Marine Infirmaries - - - -	4,458 12 6	4,757 - -	298 7 6	- -
Wages to Police Force, Marine Infirmaries - -	784 6 8	755 - -	- -	29 6 8
£.	58,438 11 5	59,289 - -	1,630 8 10	780 - 3
Saving - - -	£. 850 8 7		£. 850 8 7	

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus: caused by Deaths and Removals.

Surplus: owing to the Poor Rates on Naval Establishments being now payable out of the Civil Service Votes, and to the Expenditure for Gas and Water at Yarmouth having been less than was anticipated when the Estimate was framed.

Surplus: caused by the Payments for carting, pumping, and keeping the Walks in Repair, and other Contingent Expenses at Haslar Hospital, and for Postage, &c. at Haulbowline, having been less than for previous years on the Expenditure of which the Estimate was based.

Excess. This is merely the Difference between an estimated and an actual Expenditure.

Excess: caused by a Difference between the basis of the appropriation by the Commissioners of Metropolitan Police of the sums voted on account of the several Naval Establishments, and the classification of the Charges for the same as claimed.

Surplus: owing to Two Assistant Surgeons only having been borne and paid at Hong Kong in lieu of Four, as provided in the Estimates, and to Differences of Salary upon New Appointments.

Surplus: owing to the Cessation of the Payment for Lodging Allowances at Jamaica, consequent on the occupation of Official Residences, and to smaller Payments for Gas at Malta than was anticipated when the Estimate was framed.

Surplus: caused by the Payments for Travelling Expenses, Washing, and other Contingencies, at Jamaica and the Cape of Good Hope, being less than the average of previous years.

Surplus: caused by fewer Nurses having been required at Malta Hospital, the Number of Patients having been less than in previous years.

Excess: occasioned by an additional Assistant Surgeon having been appointed to Fort Cumberland, and by New Appointments at higher Rates of Pay.

Excess. This is merely the Difference between an estimated and an actual Expenditure.

Surplus. This is merely the Difference between an estimated and an actual Expenditure.

Surplus: occasioned by fewer Nurses having been required, principally at Woolwich, the Number of Patients having been less than in previous years.

Excess. This is merely the Difference between an estimated and an actual Expenditure.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 9.				
MARINE DIVISIONS:	£. s. d.	£. s. d.	£ s. d.	£. s. d.
Salaries, Marine Divisions - - - - -	1,745 2 6	1,714 9 -	- -	30 13 6
Rents, Rates, Taxes, Gas, and Water, Marine Divisions.	10,128 11 8	9,170 4 -	- -	958 7 8
Contingencies, Marine Divisions - - - - -	4,165 12 9	4,665 7 -	499 14 3	- -
£.	16,039 6 11	15,550 - -	499 14 3	989 1 2
Deficiency - - -	£. 489 6 11		£. 489 6 11	
VOTE No. 10.				
SECTION I.—NAVAL STORES, &c.:				
Timber, Masts, Deals, &c. - - - - -	126,557 12 1	117,563 - -	- -	8,994 12 1
Metals and Metal Articles - - - - -	168,324 - 10	202,280 - -	33,955 19 2	- -
Iron Armour Plates, Iron Beams, and Iron Masts -	134,970 18 -	123,000 - -	- -	11,970 18 -
Hemp, Canvas, &c. - - - - -	127,053 18 2	125,210 - -	- -	1,843 18 2
Paint Materials, Oils, Pitch, Tar, Tallow, and other Miscellaneous Articles.	199,417 5 -	169,934 - -	- -	29,483 5 -
Coals and other Fuel for Steam Vessels and Dock-yard purposes.	294,651 2 11	308,084 - -	13,432 17 1	- -
Carried forward - - - £.	1,050,974 17 -	1,046,071 - -	47,388 16 3	52,292 13 3

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued*.

CAUSES OF VARIATION.

Excess: arising from insufficient Provision having been made in the Estimates for the Salary of the Barrack Master at Fort Cumberland.

Excess: caused by additional Expenditure incurred for Lighting Chatham and Eastney Barracks with Gas, consequent upon the progress of the Works, and from the deficiency of Accommodation at those Barracks, which led to increased Payments of Lodging Allowances to Officers.

Surplus: caused by the Expense of the Military Police at Woolwich, Chatham, and Plymouth not having been claimed by the War Office until 1867-68: from the Payment to Ministers of various persuasions having been less than anticipated (the Number of Men spiritually attended on being under the average), and from the Contingent Expenses (chiefly Washing, Bedding, and Funerals) having been less than the average of previous years, on which the Estimate was based.

Excess: caused by the supply of a larger number of Dantzic Deck Deals than was anticipated as likely to be imported and paid for within the Financial Year.

Surplus: occasioned by the amount provided in the detailed Estimate under this item, on account of Materials for Making and Repairing Yard Machinery chargeable to Vote No. 11, but included in Credit of 70,570 *l.* deducted at the end of the aggregate Vote; also by smaller payments having been made for Anchors, Chain Cables, British Iron, and Iron Wire Rope, than were Estimated as to be made within the year.

Excess: caused by the non-delivery during the previous Financial Year of a large portion of the Iron Plates which have been paid for in the year 1866-67.

Excess. This is merely the Difference between an estimated and an actual Expenditure.

Excess: caused by larger Purchases having been made on Foreign Stations, and by greater Supplies of Miscellaneous Stores, under numerous Contracts, being required from various causes relating to the Equipment of Ships, and the Service Afloat, than were anticipated.

	£.	s.	d.
From amount provided in the detailed Estimate for Coals, &c., but included in Credit of 70,570 <i>l.</i> , deducted at the end of aggregate Vote, viz.	-	-	50,000 - -
Abate—Surplus as appearing on this Item	-	-	13,432 17 1
	£.		36,567 2 11

caused by the Credits to this Vote for Coals supplied to Troop Ships having been less than were anticipated when the Estimate was framed, owing to the Supplies having been obtained by direct purchase from Contractors, and charged to Vote 17, instead of being obtained from Naval Depôts, and by the necessity for purchasing greater Supplies Abroad than was anticipated.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
Vote No. 10— <i>continued.</i>	£. s. d.	£. s. d.	£. s. d.	£. s. d.
SECTION I.—NAVAL STORES, &c.— <i>continued.</i>				
Brought forward - - -	1,050,974 17 -	1,046,071 - -	47,388 16 3	52,292 13 3
Local Purchases of Stores at Coast Guard Stations -	6,885 3 -	5,000 - -	- -	1,885 3 -
Freight and sundry Expenses connected with Naval Stores.	25,026 4 11	23,000 - -	- -	2,026 4 11
<i>Abate—</i>	1,082,886 4 11	1,074,071 - -	47,388 16 3	56,204 1 2
Credit arising from the Net Value of Naval Stores expended in assisting the Contractors to launch the "Northumberland," provided for under Section II. of Vote No. 10 "Ships Building by Contract," in Supplementary Vote on 17th July 1866.	10,468 3 1	- - -	10,468 3 1	- -
<i>Abate—</i>				
Materials for making and repairing Yard Machinery, provided for under Vote No. 11 - - -	£. 20,570			
Coals for Her Majesty's Troop Ships, provided for under Vote No. 17 -	50,000			
	- - -	70,570 - -	- -	70,570 - -
£.	1,072,418 1 10	1,003,501 - -	57,856 19 4	126,774 1 2
	1,003,501 - -			57,856 19 4
Deficiency - - -	£. 68,917 1 10		£. 68,917 1 10	
SECTION II.—STEAM MACHINERY AND SHIPS BUILT BY CONTRACT:				
Steam Machinery for Her Majesty's Ships and Vessels.	199,025 15 8	201,000 - -	1,974 4 4	- -
Ships Building by Contract - - - - -	85,212 14 10	70,000 - -	- -	15,212 14 10
A Ship to be built on Design of Captain Coles -	- - -	10,000 - -	10,000 - -	- -
Iron Gun-boats building by Contract - - - -	8,575 6 9	7,000 - -	- -	1,575 6 9
Experimental Purposes, Sundries and Contingencies	7,687 16 6	10,000 - -	2,312 3 6	- -
Purchase of Dockyard Tugs and Barges - - -	6,000 - -	6,000 - -	- -	- -
Building and repairing Coast Guard Tenders - -	13,319 6 -	12,000 - -	- -	1,319 6 -
Repairs of Ships at other than Her Majesty's Dockyards.	48,421 5 5	20,000 - -	- -	28,421 5 5
Subsistence, &c., of Officers superintending Ships building by Contract.	1,500 3 9	2,000 - -	499 16 3	- -
£.	369,742 8 11	338,000 - -	14,786 4 1	46,528 13 -
Deficiency - - -	£. 31,742 8 11		£. 31,742 8 11	

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Excess: arising from the amount provided having been insufficient to meet the requirements of the service.

Excess: merely the difference between an estimated and an actual Expenditure.

Credit: the value of Stores supplied out of the Dockyard Stock in connection with the completion of the building of the "Northumberland."

Credit: the credits for this service are included in the several detailed items of the Votes, principally under "Metals and Metal Articles," and "Coals and other Fuel, &c.," as there stated.

Surplus: owing to about 1,340 *l.* not having been paid on the balances on the engines of the "Northumberland," "Dryad," and "Daphne," in consequence of those ships not having been finally tried; to a saving on the sum taken for launch engines; and to a small amount, under Sundries, not having been paid in consequence of the articles not having been delivered.

Excess: arising from payments having to be made upon "Valiant," "Minotaur," and "Agincourt," amounting to 9,495 *l.*, which it was considered, when the Estimates were framed, would have been made in 1865-66; from the amount expended in 1865-66 upon "Northumberland" not being so great as was anticipated when the Estimates for 1866-67 were framed; and from the contribution by the Millwall Iron Company towards that Expenditure having been paid into the Exchequer as a Naval Extra Receipt.

Surplus: consequent on the ship "Captain" not being sufficiently advanced to admit of an instalment being paid by 31st March 1867.

Excess: in consequence of less work having been performed by the contractors, and therefore less money having been paid upon "Waterwitch" in 1865-66 than was anticipated when the Estimates for 1866-67 were framed.

Surplus: the sum of 10,000 *l.* is an Estimate based upon the probable wants of the Admiralty; fewer experiments were tried and these of a less costly nature than had been submitted for.

Excess: this excess arises from larger repairs to Mortar Vessels fitted up as Watch Vessels than were anticipated before these vessels were opened out, and also to extensive repairs to First Class Steam Tenders, which after careful survey it was deemed absolutely necessary to perform.

Excess: caused by the expenditure incurred in the repairs of ships at other than Her Majesty's Dockyards, chiefly Abroad, having exceeded the provision for the same, and which could not be ascertained until the accounts for the year were made up.

Surplus: the Estimate is based upon the actual expenditure in past years, and from the various grades of the men who may be employed is necessarily only approximate.

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued*.

CAUSES OF VARIATION.

			£.	s.	d.	
Excess: arising on the following Items:						
New Machinery purchased	-	-	664	10	-	{ Caused by a Planing Machine and Break Lathe ordered in previous year being paid for this year, when no provision was made, and by the difference between the Estimated and Actual Cost of Machines.
Reduced by the following Surplus:						
Repairs to Plant and Machinery	-	-	63	12	8	{ Caused by Repairs not having been so great as anticipated.
Add: Excesses incurred on the following Items:			600	17	4	
	£.	s.	d.			
Repairs and Maintenance	-	-	208	-	-	{ Due to the execution of Repairs to Official Residences on changes of Occupants, and to necessary Repairs to Stern Berthings, and Dams to Slips on launching Vessels, the excess met out of the item for Contingencies.
Reduced by Surplus on the Item for—						
Other Works under 500 £. each	-	-	165	-	-	{ By postponing one Service.
			43	-	-	
The difference remaining as Surplus -			15	17	10	{ Small variations on other items.
			27	2	2	
Net Excess - - - £.			627	19	6	
Surplus: arising on the following Items:						
New Machinery purchased	-	-	743	4	4	{ Caused by Purchase of two 6-ton Cranes having been deferred; by the difference between Estimated and Actual Cost of Machines; and by a larger Estimate for making New Machinery having been taken than now subsequently appears to have been required.
Repairs to Plant and Machinery	-	-	2,410	15	1	
Abate: Excesses arising on the following Items:			3,153	19	5	{ Caused by the Repairs chargeable to this Head being less than were provided for.
	£.	s.	d.			
* Dredging Mud in Outer and Inner Basins	-	-	2,435	-	-	{ By making Payment for the Work executed in this financial year, instead of deferring Payment until 1867-68, sanctioned by Treasury Letter, 9th March 1867.
Other Works under 500 £. each	-	-	94	-	-	
Repairs and Maintenance	-	-	620	-	-	{ Due to the execution of Services not anticipated, which were met out of the item for Contingencies.
			3,149	-	-	
Reduced by Surplus on						{ Owing to Repairs to Official Residences on changes of Occupants, reconstructing a large and underground Flue, and other unforeseen Services, met out of the item for Contingencies.
Foundations for Machinery	-	-	185	-	-	
			2,964	-	-	{ Less Work executed than expected.
The difference remaining as Surplus -			2	11	2	
						{ Small variations on other Services.
Excess on Works	-	-	2,961	8	10	
Net Surplus - - - £.			192	10	7	

* Copy of application made to Treasury, and Treasury reply appended (*see* page 52).

STATEMENT OF THE SAVINGS AND DEFICIENCIES UPON THE GRANTS FOR

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 11— <i>continued</i> .				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.— <i>cont^d</i> .	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - - £.	19,610 8 11	19,175 - -	192 10 7	627 19 6
New Works, &c., Chatham - - - - -	127,650 10 4	171,880 - -	* 44,229 9 8	- - -
Carried forward - - - £.	147,260 19 3	191,055 - -	44,422 - 3	627 19 6

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—continued.

CAUSES OF VARIATION.

			£.	s.	d.	
Surplus arising on the following Items:						
Extension of the Yard - - - - -			58,882	-	-	From the contract not having been finally settled till nearly the close of the year, and from the number of convicts having been less than required for the Works.
Reduced by the following Excesses:	£.	s.	d.			
Clearing Harbour of Mud - - - - -	457	-	-	-	-	Caused by executing additional Dredging required.
Foundations for Machinery - - - - -	623	-	-	-	-	By additional work required to the Furnaces in the Smithery; also Foundations for Cranes, provided in Estimates last year, but not delivered until this year.
Other Works under 500 <i>l.</i> each - - - - -	276	-	-	-	-	Due to constructing an Iron Store, ordered to be executed and met out of the item for Contingencies.
Repairs and Maintenance - - - - -	1,354	-	-	-	-	Owing to expenses incurred for Sanitary Purposes during the prevalence of Cholera, extensive Repairs to Roads by the frequent use of Traction Engine, Gas Fittings in Workshops and Docks, and other urgent services, the Excess being met out of the item for Contingencies.
New Angle Iron Smithery - - - - -	1,776	-	-	-	-	Provided in Estimates 1865-66, and sanctioned by Treasury Letter, 18th December 1865, but not completed that year.
New Surgery - - - - -	181	-	-	-	-	For providing Baths and Lavatories, and other necessary Fittings.
*Repairs consequent upon Explosion at the Steam Hammer Shop - - - - -	2,893	-	-	-	-	Authorised by Treasury Letter, 24 November 1866.
*Temporary Dam for lengthening Dock No. 3 - - - - -	3,304	-	-	-	-	Authorised by Treasury Letters, 5th and 31st March 1866, for constructing an Iron-clad Ship in the Dock.
*New Iron Caisson for Dock No. 3 - - - - -	1,653	-	-	-	-	Authorised by Treasury Letter of the 5th December 1866, required for improving the efficiency of the Establishment.
*Alterations to Iron Foundry - - - - -	264	-	-	-	-	
*Additional Latrines - - - - -	415	-	-	-	-	
*Tramways and Racks for Iron Plates - - - - -	584	-	-	-	-	
			13,780	-	-	
			45,102	-	-	
Difference remaining as Excess - - - - -			52	7	6	Small variations on other Works.
Surplus on Works - - - - -	£.		45,049	12	6	
Reduced by the following Excess:	£.	s.	d.			
New Machinery - - - - -	1,856	-	5	-	-	Caused by the following Expenditure and Services having been undertaken for which no provision was made; viz., several Machines having been purchased; alterations and additions to Cement Mills; Ironwork for New Furnaces; and by the difference between Estimated and Actual Cost of New Machines.
Less Surplus:						
Repairs to Plant and Machinery - - - - -	1,035	17	7	-	-	Caused by deferred Expenditure on account of Repairs, and by a Credit from the return of an Engine and Boiler into Store.
			820	2	10	
Net Surplus - - - - -	£.		44,229	9	8	

* Copies of Applications made to Treasury, and Treasury Replies appended (*see* pages 53 and 54).

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated un

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimaf
VOTE No. 11—continued.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.—cont ^d .	£. s. d.	£. s. d.	£. s. d.	£. s.
Brought forward - - -	147,260 19 3	191,055 - -	44,422 - 3	627 19
New Works, &c., Sheerness - - - -	11,885 14 1	11,775 - -	- -	110 14
Carried forward - - - £.	159,146 13 4	202,830 - -	44,422 - 3	738 13

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

		£.	s.	d.	
Success: arising on the following Items:					
Re	Other Works under 500 l. each - - - -	342	-	-	For improving Ventilation of the Mess Room at Naval Barracks, originally a Store, represented as urgent by Medical Attendant, authorised and met out of the Item for Contingencies; also by payment of Balance for Sluice Valves, provided in Estimate last year.
For	Repairs and Maintenance - - - - -	328	-	-	By additional Repairs to Residence of the Commander in Chief on Appointment, Repairs to Pumping Engine House, Chimneys at Smithery, Masting Shed, and Gates to Dock No. 2; also Docking and Surveying Caisson of Dock No. 2, all of which were necessary and met out of the Item for Contingencies.
		£.	670	-	-
	Reduced by Surplus arising on Caisson for Dock No. 1 - - - - -	500	-	-	Completed within the Estimate.
		£.	170	-	-
	The difference remaining as Excess - - - -	52	17	10	Small variations on other Items.
	Excess on Works - - - - £.	222	17	10	
Di	Reduced by the following Surpluses:				
Re	New Machinery - - - -	£.	25	7	7
Les.	Repairs to Plant and Machinery -	86	16	2	
			112	3	9
	Net Excess - - - - £.	110	14	1	

EXPLANATORY STATEMENT of the Sums Expended, " More or Less " than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No 11—continued.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.—contd.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	159,146 13 4	202,830 - -	44,422 - 3	738 13 7
New Works, &c., Portsmouth - - - -	150,710 12 -	268,200 - -	*117,489 8 -	- - -
Carried forward . . . £.	309,857 5 4	471,030 - -	161,911 8 3	738 13 7

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

		£.	s.	d.				
Surplus: arising on the following Items:								
Extension of the Yard	- - - - -	107,096	-	-	From the Contract not having been finally settled till nearly the close of the Year, and from the Number of Convicts not having exceeded one-fourth of that estimated.			
Lowering Floor of Dock No. 7	- - - - -	6,936	-	-	This service was completed and paid for in 1865-66.			
Additional Penstock and Culvert to Harbour and Dock from Dock No. 11	- - - - -	235	-	-	A saving on the Estimate.			
Workshops for the repair of Iron Ships	- - -	7,233	-	-	Due to change of site.			
Foundations for Machinery	- - - - -	4,280	-	-	Chiefly owing to the foundations provided for the Machinery in the above Workshops having to be re-voted, the Building and Machinery not being sufficiently advanced.			
		£.	125,780	-	-			
Reduced by the following Excesses:								
*Dredging and removing Mud from Harbour	- - - - -	£.	2,142	-	-	By executing additional Dredging; sanctioned by Treasury Letter, 9th March 1867.		
Other Works under 500 £. each	- - -	483	-	-	-	Due to the execution of several Works not anticipated; met out of the item for Contingencies.		
Repairs and Maintenance	- - -	2,229	-	-	-	Due to Repairs to Caisson, also to residences on changes of occupants, and to the casual Repairs to Buildings generally; the excess met out of the item for Contingencies.		
*Constructing Stern Berthing and Dam to Slip No. 1	- - - - -	143	-	-	-	} Authorised by Treasury Letters, 4th February 1867 and 4th September 1866.		
*Forges in New Boiler Smithery	- - -	1,568	-	-	-			
Iron Shed for Smitheries	- - -	426	-	-	-	Provided in Estimates 1865-66, but not completed in that Year.		
			6,991	-	-			
		£.	118,789	-	-			
The difference remaining as Surplus	- - -		32	9	3	Arising from variations on several Items.		
Surplus on Works	- - -	£.	118,821	9	3			
Reduced by the following Excess:								
Repairs to Plant and Machinery	-	£.	1,365	6	3	-	-	The 80-horse power Engine and Boilers required a much heavier and more expensive Repair than was anticipated; as also the 16-horse power Engine and Boilers in South Saw Mills. The expenses upon the New Boiler Smithery were also greater than were anticipated.
Less Surplus:								
New Machinery	- - -		33	5	-	-	-	Caused by the difference between the estimated and actual cost of New Machines.
			1,332	1	3			
Net Surplus	- - -	£.	117,489	8	-			

* Copies of Applications made to Treasury, and Treasury Replies appended. (See pages 52 and 55.)

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 11—continued.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.—cont ^d .	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	309,857 5 4	471,030 - -	161,911 3 3	738 13 7
New Works, &c., Devonport - - -	32,862 6 9	33,555 - -	* 692 13 3	- - -
Carried forward - - - £.	342,719 12 1	504,585 - -	162,604 1 6	738 13 7

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

			£.	s.	d.	
Surplus arising on the following Items:						
New Machinery	-	-	1,324	6	9	Caused by the difference between the estimated and actual Cost of new Machines, and by the Spinning Machine not being sufficiently advanced to admit of Payment for the full Amount voted for its Purchase.
Repairs to Plant and Machinery	-	-	1,342	15	10	Caused by the Repairs to the Machinery being executed for a less Amount than was anticipated.
			2,667	2	7	
Abate: Excesses arising on the following Items:						
*Preparation of present Ropery for Spinning by Machinery	-	-	1,423	-	-	Caused by the Construction of a new Boiler and Engine-house approved by Treasury Letter, 24th October 1866.
Foundations for Machinery	-	-	174	-	-	By additional Foundations for larger Steam Hammer, and more Work generally required than provided.
Repairs and Maintenance	-	-	1,488	-	-	{ Due to Repairs and Additions to Residences of Commander-in-Chief, Admiral Superintendent, and other Officers on changes of Occupants, also for re-constructing Drains and Sanitary Works, and by the Casual Repairs exceeding the Estimate.
Renewal of Gas Mains	-	-	140	-	-	Provided in Estimates 1865-66, but not completed in that year.
Water Mains, Pipes, and Sluice Cocks	-	-	249	-	-	Provided in Estimates 1864-65 and 1865-66, but not finally completed until the present year.
			£. 3,474	-	-	
Reduced by the following Surpluses:						
Renewing a portion of the Altars of Dock, No. 4	-	-	371	-	-	Not completed: re-voted under Other Works in 1867-68.
Enlarging Reservoir for extinguishing Fire	-	-	822	-	-	Saving effected by adopting a different method to that estimated.
Other Works under 500 <i>l.</i> each	-	-	333	-	-	By deferring one Service, and by Savings on most of the other Services.
			1,526	-	-	
			£. 1,948	-	-	
The differences remaining as Excess			26	9	4	From variations on other Services.
Excess on Works	-	-	1,974	9	4	
Net Surplus			£. 692	13	3	

* Copy of Application made to Treasury, and Treasury Reply appended. (See page 56.)

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 11— <i>continued</i> .				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.— <i>cont^d</i> .	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	342,719 12 1	504,585 - -	162,604 1 6	738 18 7
New Works, &c., Keyham - - - -	48,866 9 1	40,565 - -	- -	8,301 9 1
Carried forward - - - £.	391,586 1 2	545,150 - -	162,604 1 6	9,040 2 8

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued*.

CAUSES OF VARIATION.

Excess : arising on the following Items :		£.	s.	d.	
Constructing Basins, Docks, and Factory	-	7,864	-	-	Owing to increased energy on the part of the contractors.
Foundations for Machinery	- - - -	91	-	-	By foundations to new crabs, and zincing bath not provided.
Other works, under 500 <i>l.</i> each	- - -	392	-	-	From executing additional works ordered, the expense being met out of the Item for Contingencies.
Repairs and maintenance	- - - -	180	-	-	By additional repairs to furnaces necessary for the efficiency of the service, and met out of the Item for Contingencies.
Purchase of Property	- - - -	194	-	-	This expense is for the purchase of toll-house, &c., in connection with the extension north of the yard.
Powder Magazine, Bull Point	- - -	107	-	-	Payment of War Office claims for works executed in past years, but not presented before.
	£.	8,828	-	-	
Reduced by Surplus on—					
Building foundations, &c., for additional pumping power for South Basin	- - -	1,359	-	-	Not completed : the work re-voted in 1867–68.
		7,469	-	-	
For differences remaining as excess	- - -	2	10	6	Small variations on the Items.
Excess on Works	- - - £.	7,471	10	6	
Add,—Excesses incurred on the following Items :					
	£.	s.	d.		
New Machinery	- - -	319	16	4	Caused by the difference between the estimated and actual cost of new machines, and the payment of a balance left over from the previous financial year on sheer legs.
Repairs to Plant and Machinery	510	2	3	-	Caused by repairs to machinery when taken in hand being greater than were anticipated.
		829	18	7	
Net Excess	- - - £.	8,301	9	1	

EXPLANATORY STATEMENT of the Sums Expended "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 11.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.--cont ^d .	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	391,586 1 2	545,150 - -	162,604 1 6	9,040 2 8
New Works, &c., Plymouth Sound. - - -	4,309 6 2	4,545 - -	235 13 10	- -
New Works, &c., Pembroke - - - - -	19,224 9 11	15,595 - -	- -	* 3,629 9 11
Carried forward - - - £.	415,119 17 3	565,290 - -	162,839 15 4	12,669 12 7

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus: Works not completed. Re-voted in 1867-68.			£.	s.	d.	
Excess: arising on the following Items:						
Extension of Smithery	-	-	376	-	-	Due to the increase on Contract Rates allowed since the Estimate was framed.
Foundations for Machinery	-	-	330	-	-	Owing to the non-payment of a Claim last year.
Other Works under 500 l. each	-	-	402	-	-	By executing several necessary Services not anticipated, ordered, and met out of the Item for Contingencies.
Repairs and Maintenance	-	-	231	-	-	From necessary Repairs to Slip Roofs, and other urgent services, met out of the Item for Contingencies.
*Traveller ways at sides of Slip No. 4	-	-	2,677	-	-	Authorised by Treasury Letter, dated 24th November 1866, to facilitate the Building of an Iron Clad Ship.
			2	17	-	Small variations on other Items.
Excess on Works			£.	4,018	17	-
Reduced by the following Surpluses:						
New Machinery	-	-	£.	10	18	1
Repairs to Plant and Machinery	373	9	-	-	-	Caused by the difference between the Estimated and Actual Cost of New Machines.
				389	7	1
Net Excess			£.	3,629	9	11

* Copy of Application made to the Treasury, and Treasury Reply appended. (See page 57.)

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued*.

CAUSES OF VARIATION.

Surplus arising on the following Works:			£.	s.	d.	
Haulbowline: For the Construction of a Dock by Convict Labour - - - - -			7,745	-	-	Owing to the small number of convicts available, the works have advanced less than was anticipated.
Repairs and Maintenance - - - - -			139	-	-	The casualties have been less than estimated.
Differences on other Services - - - - -			4	-	6	Small variations on other Items.
Surplus on Works - - - £.			7,888	-	6	
Add—Surplus on the following Item:						
Haulbowline: Repairs to Plant and Machinery -			21	17	4	Caused by the repairs not having been so great as was anticipated.
Net Surplus - - - £.			7,909	17	10	
Excess arising on the following Items:						
Royal Victoria Yard:						
Foundations for Machinery - - - - -			463	-	-	Due to necessary works in connection with the Preserved Meat Apparatus being in Excess on the Estimate; the requirements before unknown.
Repairs and Maintenance - - - - -			504	-	-	By alterations to Slaughter and Pickling Premises; Repairs to Floor and Gates of Canal; and Repairs to Residence of Captain Superintendent, on appointment; the Expense met out of the Item for Contingencies.
			967	-	-	
Reduced by Surplus on Royal Clarence Yard:						
Works under 500 £. each - - - - -			136	-	-	From an alteration in the plan originally proposed.
			831	-	-	
The difference remaining as Excess - - - - -			36	6	-	Small variations on other Items.
Excess on Works - - - £.			867	6	-	
Add—Excesses on the following Items:						
Royal Victoria Yard:			£.	s.	d.	
New Machinery - - - - -			471	17	7	Caused by the purchase of the following Machines, for which there was no provision; a Curved Cutter Sharpening Machine; a Saw Sharpening Machine; and a Crozing and Chiming Machine.
Repairs to Plant and Machinery			205	4	8	
						677 2 3
			£.			1,544 8 3
Reduced by the following Surpluses:						
Royal Clarence Yard:						
Repairs to Plant and Machinery			327	15	11	Caused by less Repairs being found necessary than was anticipated.
Royal William Yard:						
Repairs to Plant and Machinery			782	18	5	
						1,110 14 4
Net Excess - - - £.			433	13	11	Caused by Repairs to Machinery not having been so extensive as expected when the Estimates were made.

STATEMENT OF THE SAVINGS AND DEFICIENCIES UPON THE GRANTS FOR

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 11.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.— <i>contd.</i>				
Brought forward - - -	£. s. d. 430,433 13 4	£. s. d. 588,080 - -	£. s. d. 170,749 13 2	£. s. d. 13,103 6 6
New Works, &c., Medical Establishments at Home -	7,843 12 1	7,700 - -	- - -	143 12 1
Carried forward - - - £.	438,277 5 5	595,780 - -	170,749 13 2	13,246 18 7

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—continued.

CAUSES OF VARIATION.

	£.	s.	d.	
Excess arising on the following Items:				
Haslar: Repairs and Maintenance - - -	478	-	-	Caused by extensive Repairs to Breakwater, which was damaged by gales; and to the casualties being more than Estimated; the expense met out of the Item for Contingencies.
Yarmouth: Boundary Wall to Enclosure; new ground - - - - - }	335	-	-	{ By additions to Contract necessary for the stability of the Work.
Other Works under 500 <i>l.</i> each - - -	241	-	-	Owing to Reconstructing the Drainage for sanitary requirements; ordered to be met out of the Item for Contingencies.
	1,054	-	-	
Reduced by Surpluses on the undermentioned Services:				
	£.			
Haslar: Works under 500 <i>l.</i> each - - -	118	-	-	From deferring one Item and altering another from the original intention.
Yarmouth: Forming Exercising Ground - - -	387	-	-	As this service is being done by the inmates, the Expenditure depends upon the materials required; hence this saving.
	505	-	-	
	549	-	-	
The difference remaining as Excess - - -	36	12	7	Small variations on other Items.
Excess on Works - - - £.	585	12	7	
Reduced by Surplus at Haslar, on Repairs to Plant and Machinery - - - - - }	442	-	6	Caused by less Repairs being found necessary than was anticipated.
Net Excess - - - £.	143	12	1	

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

			£.	s.	d.
Excess arising on the following Items :					
Woolwich: Repairs and Maintenance	-	-	270	-	-
Chatham: Repairs and Maintenance	-	-	111	-	-
Forton: Repairs and Maintenance	-	-	127	-	-
* Forton: Extending Drain from Military Prison to Forton Lake	-	-	900	-	-
Eastney: Constructing Officers' Quarters, with Fort Cumberland, &c.	-	-	1,578	-	-
* Eastney: Temporary Hospital for Cholera Patients	-	-	435	-	-
* Plymouth: Constructing additional Barrack Accommodation	-	-	7,021	-	-
Plymouth: Repairs and Maintenance	-	-	109	-	-
Deal: Repairs and Maintenance	-	-	132	-	-
Deal: General scheme of Drainage	-	-	872	-	-
		£.	11,555	-	-
Reduced by Surplus on :					
Chatham: Purchase of Land and Constructing additional Barrack Accommodation	-	-	3,483	-	-
		£.	8,072	-	-
The Difference remaining as Surplus	-	-	53	12	11
Excess on Works	-	-	8,018	7	1
Add, Excess on the following Item :					
Forton: Repairs to Plant and Machinery	-	-	5	17	1
Net Excess	-	-	8,024	4	2
Excess arising on the following Items :					
Woolwich: Works under 500 £. each	-	-	157	-	-
Woolwich: Repairs and Maintenance	-	-	229	-	-
Chatham: Repairs and Maintenance	-	-	90	-	-
		£.	476	-	-
The Difference remaining as Surplus	-	-	-	5	2
Net Excess	-	-	475	14	10

This arises from the purchase of the necessary Plant required for executing the Repairs by Marine labour, and from several Services not anticipated, executed and met out of the Item for Contingencies.

By Repairs to one official residence, on change of occupant, directed to be met out of the Item for Contingencies.

By additional Gas Fittings generally, and Repairs to residences, on changes of occupants, the Excess met out of the Item for Contingencies.

Authorised by Treasury Letter of 18th September 1866, required for improving Sanitary Arrangements.

In progress: the Works advanced more rapidly than expected.

Authorised by Treasury Letter, 21st January 1867.

From a large payment for purchase of Land for extension of Barracks, the amount settled by arbitration sanctioned by Treasury Letter, 9th March 1867.

For Ventilation of Barrack-rooms, and other necessary services, the Expense being met out of the Item for Contingencies.

By providing New Boiler to Baths at Infirmary, Works at Guard House, &c., met out of the Item for Contingencies.

Voted in Estimates 1865-66, but completed and paid this year.

Unexpended Balance: Works not quite complete.

Small variations on other Services.

Caused by Repairs not anticipated.

Due to restoring the Embankment to prevent damage to Building, met out of the Item for Contingencies.

Owing to repairing, painting, and whitewashing the Wards, and providing a Water Meter, met out of the Item for Contingencies.

Caused by renewal of Water Pipes generally to Wash-houses and Baths, and by Repairs to Flues to prevent accidents by fire, the Excess being met out of the Item for Contingencies.

Small variations on other Items.

Treasury Replies appended. (See pages 52, 57, and 58).

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE, No. 11.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.— <i>contd.</i>	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	509,162 4 5	658,165 - -	170,749 13 2	21,746 17 7
New Works, &c. Coast Guard - - - -	39,154 9 2	39,500 - -	345 10 10	- -
Repairs and Alterations at the Admiralty Offices at Whitehall and Somerset House.	7,812 18 8	5,000 - -	- -	* 2,812 18 8
New Works, &c., Naval Establishments Abroad- -	207,945 7 9	177,370 - -	- -	* 30,575 7 9
Carried forward - - - £.	764,075 - -	880,035 - -	171,095 4 -	55,185 4 -

* Copies of applications made to the Treasury

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus. This is merely the Difference between an estimated and actual Expenditure.

*Excess: due mainly to the Expenditure necessary for putting the official residences in proper Repair on the changes of occupancy, increased Expenditure in preparing Working Models, providing Offices for Draughtsmen under Controller's Department, &c., 1,500 *l.* of the Excess approved by Treasury Letter, 11th September 1866.

Excess arising on the following Items:	£.	s.	d.	
*Gibraltar: Additional Building for New Machinery - - - - -	1,364	-	-	{ Authorised by Treasury Letter of 17th August 1866: required for the efficiency of the Establishment.
*Malta: For Dredging and Extending the Great Harbour - - - - -	18,288	-	-	{ For expediting the Work: Excess approved by Treasury Letter, 9th March 1867.
*Malta: For the Construction of a Dock - - - - -	6,070	-	-	{ By increased energy in prosecuting the Work: Excess of 5,000 <i>l.</i> approved by Treasury Letter, 9th March 1867.
*Malta: For Naval Prison - - - - -	1,978	-	-	{ By increased energy in prosecuting the Work for rendering the Building fit for occupation: Excess of 2,000 <i>l.</i> approved by Treasury Letter, 9th March 1867.
*Malta: Repairs and Maintenance - - - - -	243	-	-	{ Due to Repairs to official residence of Commander in Chief on change of occupant, and other necessary services; Expense met out of the Item for Contingencies.
*Bermuda: For a Floating Dock - - - - -	27,933	-	-	{ By increased energy in prosecuting the Work: approved by Treasury Letter, 9th March 1867.
Bermuda: Workmen's Cottages - - - - -	206	-	-	{ Necessary for completing the Houses in this year for occupation.
Bermuda: Repairs and Maintenance - - - - -	332	-	-	{ Due to repairing Buildings and Sea Walls damaged by Gales, unforeseen, and charged to the Item for Contingencies.
Halifax: Removing Coal Stores to new Site, and Altering Coal Wharf - - - - -	209	-	-	{ Provided for in 1865-66, but deferred and executed in this year: the Work is still progressing.
Halifax: Other Works under 500 <i>l.</i> each - - - - -	267	-	-	{ For providing a Lathe Room and other necessary Services: the Excess met out of the Item for Contingencies.
*Vancouver's Island: Building for Machinery - - - - -	733	-	-	{ Authorised by Treasury Letter of 30th April 1866, for the efficiency of the Establishment.
*Vancouver's Island: Building additional Provision Stores - - - - -	807	-	-	{ Authorised by Treasury Letter of 27th July 1866: necessary for the protection of the Stores.
*Vancouver's Island: Constructing new Coal Wharf at Thetis Island - - - - -	525	-	-	{ Authorised by Treasury Letter of 29th March 1867, the old Wharf having entirely broken down.
*Vancouver's Island: Building for Naval Ordnance Stores - - - - -	866	-	-	{ Authorised by Treasury Letter of 29th March 1867: necessary for the protection of the Stores.
*Cape of Good Hope: Extending Pier Head for affording additional Protection - - - - -	1,059	-	-	{ Authorised by Treasury Letters of 1st June 1866 and 9th March 1867: necessary for completing this Work.
Cape of Good Hope: Repairs and Maintenance - - - - -	227	-	-	{ By Casual Repairs being heavier than expected, and by Repairs to official residence on change of occupant.
Cape of Good Hope: Other Works under 500 <i>l.</i> each - - - - -	112	-	-	{ Due to constructing a Slip for repairing Boats: directed to be met out of the Item for Contingencies.
Trincomalee: Repairs to Admiralty House - - - - -	144	-	-	{ Voted in Estimates 1865-66, and not completed until this year.
Trincomalee: Other Works under 500 <i>l.</i> each - - - - -	206	-	-	{ Voted in Estimates 1865-66, and not completed until this year.
Carried forward - - - £.	61,569	-	-	

and Treasury Replies, appended. (See pages 52, and 58 to 63.)

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE, No. 11.				
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.— <i>contd.</i>	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	764,075 - -	880,035 - -	171,095 4 -	55,135 4 -
New Works, &c., Naval Establishments Abroad— <i>continued.</i>				
Carried forward - - - £.	764,075 - -	880,035 - -	171,095 4 -	55,135 4 -

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

	£.	s.	d.	
Brought forward - - -	61,569	-	-	
Excess arising on the following Items— <i>continued.</i>				
Hong Kong: New Offices and Quarters for Artificers, with Stores underneath - - }	206	-	-	Due to payment to Contractors for extra Works.
Hong Kong: Other Works under 500 £. each -	160	-	-	Owing to the Execution of necessary Works not anticipated, met out of the Item for Contingencies.
Hong Kong: Repairs and Maintenance - -	242	-	-	The Repairs required to the Buildings, were much heavier than Estimated. Expense met out of the item for Contingencies.
Hong Kong: Extension of Stone Jetty - -	338	-	-	For completion, continued from last year.
Hong Kong: Forming the ground and two Jetties at Naval Coal Stores at Kowloon - - }	191	-	-	Payment for Work provided in Estimates 1863-64.
	62,706	-	-	
Reduced by Surpluses on the following Services:				
	£.			
Gibraltar: Extension of the Mole -	255	-	-	Not completed: Work still progressing.
Malta: Purchase of Property - -	26,996	-	-	Payment made in 1865-66, under Treasury approval, 24 March 1866.
Malta: Foundations for Machinery -	118	-	-	The difference between Estimates and actual Expenditure.
Malta: Other Works under 500 £. each -	299	-	-	By a saving on the Items for the purchase of a House near the French Prison.
Ascension: New Tank - - -	730	-	-	Owing to the scarcity of Labour on the Island, this Work could not be commenced.
Ascension: Cottages for Artificers -	441	-	-	In hand: but from want of Labour the progress was necessarily slow.
Ascension: Other Works under 500 £. each - - - - - }	453	-	-	{ In hand: but from want of Labour the progress was necessarily slow.
	29,292	-	-	
	33,414	-	-	
The Difference remaining as Surplus - - - -	263	14	3	Small variations on other Items.
Excess on Works - £.	33,150	5	9	
Reduced by Surpluses on the following Items:				
	£.	s.	d.	
Gibraltar: New Machinery - -	345	-	-	Caused by the difference between the Estimated and actual Cost of new Machines.
Gibraltar: Repairs to Plant and Machinery - - - }	39	11	6	{ Caused by the Repairs not having been so great as anticipated.
Malta: New Machinery - -	568	10	-	Caused by the difference between the Estimated and actual Cost of New Machines.
Malta: Repairs to Plant and Machinery - - - }	343	3	11	{ Caused by the Repairs not having been so great as anticipated.
Bermuda: New Machinery - -	300	-	-	Caused by a small Furnace for which money was Voted not being obtained.
Hong Kong: New Machinery -	1,000	-	-	Caused by the Crane for which this money was provided being appropriated to Devonport.
	2,596	5	5	
Abate Excesses on the following Items:				
	£.	s.	d.	
Halifax: Repairs to Plant and Machinery - - }	9	13	1	
Vancouver Island: Repairs to Plant and Machinery }	10	19	5	
Hong Kong: Repairs to Plant and Machinery - }	-	14	11	
	2,574	18	-	
Net Excess - £.	30,575	7	9	Caused by Repairs not anticipated.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE, No. 11.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
NEW WORKS, BUILDINGS, MACHINERY, AND REPAIRS IN THE YARDS, &c.— <i>cont^d.</i>				
Brought forward - - -	764,075 - -	880,035 - -	171,095 4 -	55,135 4 -
New Works, &c., Victualling Establishments Abroad	542 10 7	500 - -	- - -	42 10 7
New Works, &c., Medical Establishments Abroad -	3,139 13 5	2,330 - -	- - -	809 13 5
* New Works, &c., Contingencies (Works and Repairs)	1,147 1 10	10,000 - -	8,852 18 2	- - -
£.	768,904 5 10	892,865 - -	179,948 2 2	55,987 8 -
Saving - - -	£.123,960 14 2		£.123,960 14 2	

* Copy of Application made to Treasury,

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—continued.

CAUSES OF VARIATION.

Excess arising on the following Items :	£. s. d.	
Halifax : Repairs and Maintenance - - -	37 - -	Caused by additional necessary Repairs to Hospital, met out of the Item for Contingencies.
Malta : Repairs to Plant and Machinery - -	- 11 3	Caused by Repairs not anticipated.
	4 19 4	Small variations on other Items.
£.	42 10 7	
Excess arising on the following Items :		
Malta : Gas Mains and Fittings - - -	103 - -	Caused by executing additional Works considered necessary for the proper Lighting and Ventilating of the Building generally.
Malta : Repairs and Maintenance - - -	110 - -	Due to Services required not anticipated, the Excess being charged to the Item for Contingencies.
Malta : Other Works under 500 <i>l.</i> each - -	602 - -	For the completion of a Reception-room provided in Estimates 1865-66.
	815 - -	
The Difference remaining as Surplus - - -	5 6 7	Small variations on other Works.
Excess on Works - - - £.	809 13 5	

Surplus : This Vote is taken to meet the Expenditure for Works of an unforeseen character, whether chargeable to this head in the Admiralty Ledger, or to other Items under which, if the Works had been foreseen, they would have been provided for. The Expenditure on account of the latter Service, defrayed out of the money taken under this Item, is 15,823*l.* 18*s.* 8*d.*, consequently there is an Excess of 6,971*l.* 0*s.* 6*d.*

The sanction of the Treasury to Expenditure, amounting to 1,500*l.* under this Item, was given by Letter dated 11th September 1866.

and Treasury Reply, appended. (See page 63.)

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

(B.)

Sir,

Admiralty, 27 February 1867.

I AM commanded by my Lords Commissioners of the Admiralty to request that you will inform the Lords Commissioners of Her Majesty's Treasury that, chiefly with a view to the reduction of the annual Estimates for the next financial year 1867-68, my Lords have proposed that the works contained in the accompanying list, amounting to 80,140 £., the payments for which in the ordinary course would be chargeable on Vote 11, in the year 1867-68, should be proceeded with, and paid out of the estimated surplus of 129,000 £., remaining on Vote No. 11, in the current financial year, and for this purpose the sums required were withdrawn from the draft Estimates for 1867-68.

The surplus on Vote No. 11, in the present financial year, arises chiefly in consequence of the delay in the preliminary arrangements connected with the contract works for the extension of the dockyards at Chatham and Portsmouth.

I am therefore to request that the Lords of Her Majesty's Treasury will give their concurrence to the proposed appropriation of a portion of the surplus on Vote No. 11, for the prosecution of the works mentioned in the enclosed list.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

		£.
Woolwich Dockyard	Dredging mud in inner and outer basins, to complete.	2,440
Chatham Marine Barracks	Straw Store	700
Portsmouth Dockyard	Dredging and removing mud from harbour	2,000
	Filling up millpond at Forton	1,000
Keyham Yard	Buildings, foundations, &c., for additional pumping power, south basin.	2,000
Plymouth Marine Barracks	Constructing additional barrack accommodation.	8,000
Admiralty Offices	Purchase of house, No. 14, Spring Gardens	9,000
Malta Yard	Dredging and extending the Great Harbour	20,000
	For dock, French Creek	5,000
	For Naval Prison	2,000
Bermuda Yard	Floating dock	28,000
TOTAL		80,140

(B.)

Sir,

Treasury Chambers, 9 March 1867.

THE Lords Commissioners of Her Majesty's Treasury have had before them your letter of the 27th ultimo, proposing to appropriate a portion of the estimated surplus of 129,000 £. on Vote 11 for 1866-67, in the execution of certain works, &c., in diminution of the Estimates for 1867-68.

I am to request that you will convey to the Lords Commissioners of the Admiralty the approval of my Lords of the appropriation of the sum of 71,140 £., out of the surplus in question, for the following services; viz.:

		£.
Woolwich Dockyard	Dredging inner and outer basin	2,440
Chatham Marine Barracks	Straw Store	700
Portsmouth	Dredging Harbour	2,000
	Filling up mill pond, Forton	1,000
Keyham	Foundation, &c., for additional pumps, South Basin	2,000
Plymouth Marine Barracks	Constructing additional accommodation	8,000
Malta	Dredging and extending Great Harbour	20,000
	Dock at French Creek	5,000
	Naval prison	2,000
Bermuda	Floating dock	28,000
TOTAL		71,140

With

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

With respect to the item of 9,000 *l.* proposed for the purchase of No. 14, New-street, Spring Gardens, I am to state, with reference to my letter of the 29th January last, that my Lords must postpone any decision with respect to purchases of this nature until the report has been received from the Commissioners of Inquiry, upon the question of the accommodation of public offices.

The Secretary to the Admiralty.

I am, &c.,
(signed) *George Ward Hunt.*

(C.)

Sir,

Admiralty, 23 October 1866.

I AM commanded by my Lords Commissioners of the Admiralty to acquaint you, for the information of the Lords Commissioners of the Treasury, that the question having been carefully gone into as to the amount of damage caused by the boiler explosion at the steam-hammer shop adjoining the metal mills at Chatham Dockyard, the sum at which the cost of making good the damages is estimated is four thousand one hundred and thirty-two pounds (4,132 *l.*), this sum, if allowed, being chargeable to the aggregate Vote No. 11, to be met out of the surplus expected upon that Vote. The works necessary to be done having been carefully considered, I am commanded to request you will move the Lords Commissioners of the Treasury to signify their concurrence in this expenditure.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

(C.)

Sir,

Treasury Chambers, 24 November 1866.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to acquaint you, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 23rd October last, that they approve of the sum necessary to repair the damage caused by the boiler explosion at Chatham Yard, viz., 4,132 *l.*, being temporarily charged to the savings expended on the aggregate Vote No. 11, as requested in your letter.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

(D.)

Sir,

Admiralty, 25 October 1866.

WITH reference to your letter of 5th March last, signifying the concurrence of the Treasury in an expenditure of 1,230 *l.* for the construction of a temporary dam at the entrance of dock No. 3 at Chatham Yard, the amount being charged as an excess on the expenditure for the year 1865-66, I am commanded by my Lords Commissioners of the Admiralty to state, for the information of the Lords Commissioners of the Treasury, that in consequence of the late period when the work was ordered, it was found impossible to spend more than 820 *l.* upon the work before the 31st March, the close of the financial year.

The above Estimate was based upon a design for making use of the present old timber caisson, so as to form part of the dam. On proceeding, however, with this scheme, the very rotten condition of the old caisson rendered it imprudent to depend upon it alone to resist the pressure to which it would be exposed, and as the safety of the ship and the lives of the men employed in it in the dock would thus have been risked, it became imperatively necessary to strengthen the dam by an outer row of piling, and additional braces and shores, involving an outlay of 3,950 *l.*, or an expenditure unprovided for of about 3,130 *l.*, which is still within the cost of a dam constructed in the ordinary manner. The value and importance of the work itself, however, is fully commensurate with its cost, as the end sought by its construction, viz., the lengthening of dock No. 3, so that the "Hercules" and "Monarch" may be built simultaneously at Chatham, has been accomplished; and further, that during the existence of this dam advantage will be taken of the opportunity afforded to prepare the stone work at the dock entrance within the dam for a new iron caisson, by which the dock will be permanently lengthened, and which also would have required a dam.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

Under these circumstances, I am to request you will move the Lords of the Treasury to signify their concurrence to this expenditure, to be met out of the surplus on the aggregate of Vote No. 11 of this year.

The Secretary of the Treasury.

I am, &c.
(signed) *Henry G. Lennox.*

(D.)

Sir,

Treasury Chambers, 26 November 1866.

WITH reference to your letter of the 25th ultimo, I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty the approval of my Lords of the temporary appropriation of the sum of 3,130*l.* out of the aggregate savings to be effected on Vote 11, towards the cost of strengthening the dam at the entrance of No. 3 dock, Chatham, as requested in your letter.

The Secretary of the Admiralty.

I am, &c.
(signed) *George Ward Hunt.*

(E.)

Sir,

Admiralty, 27 October 1866.

I AM commanded by my Lords Commissioners of the Admiralty to request that you will lay before the Lords Commissioners of the Treasury the following list of services which were brought before this Board at their recent visitation at Chatham Dockyard, and which, being considered absolutely necessary, are proposed to be executed in the present financial year:—

	£.
1st. Roofs over ships in Docks Nos. 2 and 3 - - - - -	2,500
(This forms part of a general scheme for covering over permanently the docks in which iron ships are now being built; the total cost of which, as will be shown in the first column of the ensuing Estimates, amounts to 20,000 <i>l.</i>)	
2nd. New iron caisson for Dock No. 3 - - - - -	4,500
3rd. Alterations at iron foundry - - - - -	650
4th. Additional latrines in the yard - - - - -	640
5th. Tramway and racks for iron plates - - - - -	600
TOTAL - - - £.	8,890

I am to observe, that the execution of these necessary services this year will not only relieve the Vote required for next year, now proposed, but will effect very considerable economy in carrying on the works of the establishment generally; I am commanded, therefore, to request that you will move the Lords Commissioners of the Treasury to signify their concurrence in the proposed expenditure.

The Secretary of the Treasury.

I am, &c.
(signed) *Henry G. Lennox.*

(E.)

Sir,

Treasury Chambers, 5 December 1866.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 27th October, the approval of my Lords of the following expenditure on works at Chatham Dockyard being temporarily defrayed out of the expected surplus on the aggregate Votes, viz:—

	£.
1. Roofs over Docks, No. 2, &c. - - - - -	2,500
2. New iron caisson for Dock No. 3 - - - - -	4,500
3. Alteration in iron foundry - - - - -	650
4. Additional latrines in yard - - - - -	640
5. Tramways and racks for iron plates - - - - -	600
TOTAL - - - £.	8,890

The Secretary to the Admiralty.

I am, &c.
(signed) *George Ward Hunt.*

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

(F.)

Sir,

Admiralty, 28 August 1866.

I AM commanded by my Lords Commissioners of the Admiralty to acquaint you, for the information of my Lords Commissioners of Her Majesty's Treasury, that on the recent visitation of the Board to the dockyard at Portsmouth, among the services proposed to be executed in the present financial year, their Lordships considered it expedient to incur an expense in connexion with the forges in the new boiler smithery in that yard; and I am to request that you will move the Lords Commissioners of the Treasury to signify their concurrence in this expenditure, which is estimated at 1,460 *l.* This charge, if authorised, might be met out of the anticipated surplus on the aggregate Vote.

The Secretary of the Treasury.

I am, &c.
(signed) *Henry G. Lennox.*

(F.)

Sir,

Treasury Chambers, 4 September 1866.

I HAVE laid before the Lords Commissioners of Her Majesty's Treasury Lord H. G. Lennox's letter of the 28th ultimo, requesting the sanction of this Board to an estimated expenditure of 1,460 *l.*, in connexion with the new boiler smithery in Portsmouth Dockyard, and their Lordships desire me to acquaint you, for the information of the Lords Commissioners of the Admiralty, that they will not object to this payment being temporarily charged to savings to be effected on the aggregate Vote.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

(G.)

Sir,

Admiralty, 28 January 1867.

A NEW temporary dam being urgently required for No. 1 slip at Portsmouth, as well as the renewal of the stern berthing, in order to enable the construction of the ships ordered in the programme of works for 1867-68, to be carried out, I am commanded by my Lords Commissioners of the Admiralty to request you will move the Lords Commissioners of Her Majesty's Treasury to sanction an expenditure estimated at 655 *l.* on this work, to be charged to the aggregate Vote, observing that the necessity for this work has arisen since the Estimates were framed.

The Secretary of the Treasury.

I am, &c.
(signed) *H. G. Lennox.*

(G.)

Sir,

Treasury Chambers, 4 February 1867.

I am directed by the Lords Commissioners of Her Majesty's Treasury, to acquaint you, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 28th ultimo (E.), that they approve of the temporary appropriation of the sum of 655 *l.*, being the cost of certain works urgently required at Portsmouth Dockyard, out of the savings expected on the aggregate Vote No. 11, as requested in your letter.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

(H.)

Sir,

Admiralty, 15 October 1866.

THE sum of 3,000 £, taken as this year's Estimate under Devonport Dockyard, for the preparation of the present ropery for spinning by machinery, having proved insufficient, to render the accomodation complete, and bring the machinery for working the ropery into full operation, I am commanded by my Lords Commissioners of the Admiralty to request you will move the Lords of the Treasury to sanction the immediate execution of the following additional works, the original Estimate having been preferred before the actual wants of the service were known, viz. :—

	£.
1st. New boiler-house and engine-house - - - - -	2,600
2nd. Foundations for machinery - - - - -	150
3rd. Dining-room, &c. for workwomen - - - - -	250

This sum it is proposed to charge to the aggregate Vote No. 11, on which there will be a large surplus.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

(H.)

Sir,

Treasury Chambers, 24 October 1866.

WITH reference to your letter of the 15th instant, I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, their Lordships' approval of the temporary appropriation of the sum of 3,000 £, out of the expected surplus on Vote No. 11, to the execution of the following works at Devonport Dockyard, viz. :—

	£.
1. New boiler-house and engine-house at ropery - - - - -	2,600
2. Foundations for machinery - - - - -	150
3. Dining-room for workwomen - - - - -	250
TOTAL - - - - - £.	3,000

as requested in your letter.

The Secretary to the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

(I.)

Sir,

Admiralty, 11 March 1867.

I AM commanded by my Lords Commissioners of the Admiralty to request you will inform the Lords Commissioners of Her Majesty's Treasury, that in the Estimates for this year, a sum of 25,000 £ is provided under the item of "Constructing Basins, Docks, and Factory" at Keyham, on account of the Extension of the North Basin, and that in consequence of increased energy on the part of the contractor, recently exerted on this work, payments on account, under the terms of the contract, will become due, probably to the extent of 7,000 £ in excess of this year's Vote.

The total Estimate for the work is not expected to be exceeded, and the proposed payments, if made in excess this year, will relieve the expenditure anticipated next year to the same extent.

This excess will not reduce the probable surplus of 48,860 £ on Vote No. 11, as reported in my letter of the 27th ultimo, as in preparing that statement the Director of Works then anticipated that payments would be made on account of the contract works for the extension of the yards at Chatham and Portsmouth to the amount of 40,000 £, together, but which he now fears, from the progress of the works, cannot be accomplished.

My Lords, therefore, request that you will move the Lords Commissioners of Her Majesty's Treasury to sanction the proposed additional expenditure at Keyham.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

(I.)

Sir,

Treasury Chambers, 30 March 1867.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to state, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 11th instant, that my Lords approve of the temporary appropriation out of the savings on Vote No. 11, for 1866-67, of a sum not exceeding 7,000 *l.*, to meet the expected excess over the Estimate for the works at Keyham Yard, as requested in your letter.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. A. Hamilton.*

(K.)

Sir,

Admiralty, 19 November 1866.

TRAVELLER ways being required at the slip No. 4, at Pembroke Dock, for the purpose of securing expedition in building Her Majesty's ship "Inconstant," and saving a large amount of manual labour, I am commanded by my Lords Commissioners of the Admiralty to request you will move the Lords Commissioners of Her Majesty's Treasury to sanction the work being undertaken at a cost of 2,700 *l.*, which may be saved out of the aggregate Vote No. 11, in the financial year.

The Secretary of the Treasury.

I am, &c.
(signed) *H. G. Lennox.*

(K.)

Sir,

Treasury Chambers, 24 November 1866.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty with reference to your letter of the 19th November, the approval of my Lords of the sum of 2,700 *l.* required for the construction of "traveller ways" at Pembroke Yard, being temporarily charged to the saving to be effected on Vote No. 11, as requested.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

(L.)

Sir,

Admiralty, 11 September 1866.

I AM commanded by the Lords Commissioners of the Admiralty, to request that you will move the Lords Commissioners of Her Majesty's Treasury, to concur with my Lords in authorising an expenditure of 965 *l.* for extending the main sewer from the Military Prison and Forton Barracks, below the low-water level of Forton Lake, Gosport.

This service was suggested by the Sanitary Committee, on their inspection in January last, and was strongly recommended by the surgeon and the Colonel Commandant.

My Lords, on their recent visitation, were convinced of the absolute necessity for the immediate execution of this work, on sanitary grounds, and they would propose that the cost be met out of the surplus expected on the aggregate Vote this year.

The Secretary of the Treasury.

I am, &c.
(signed) *H. G. Lennox.*

EXPLANATORY STATEMENT of the Sums Expended, "More or Less," than those Estimated, under

(L.)

Sir,

Treasury Chambers, 18 September 1866.

WITH reference to your letter of the 11th September, I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, the approval of my Lords of the expenditure, viz., 965 *l.*, necessary for extending the main sewer from the Military Prison and Forton Barracks below the low-water level of Forton Lake, Gosport, being temporarily met out of the surplus expected on the aggregate Vote for 1866-67.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

(M.)

Sir,

Admiralty, 15 January 1867.

An expenditure of 978 *l.* having been incurred in August last for the erection of a hospital hut and other arrangements at Eastney Barracks, Portsmouth, in anticipation of the cholera, I am commanded by my Lords Commissioners of the Admiralty to request you will move the Lords Commissioners of Her Majesty's Treasury to sanction the outlay for this service being defrayed out of the anticipated surplus on the aggregate Vote No. 11.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

(M.)

Sir,

Treasury Chambers, 21 January 1867 (E.).

I AM directed by the Lords Commissioners of Her Majesty's Treasury to acquaint you, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 15th instant, that my Lords approve of the expenditure caused by the erection of a hospital hut at Eastney Barracks, Portsmouth, viz., 978 *l.*, being temporarily charged to the anticipated surplus on Vote No. 11.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. A. Hamilton.*

(N.)

Sir,

Admiralty, 24 April 1866.

I AM commanded by the Lords Commissioners of the Admiralty to acquaint you, for the information of the Lords Commissioners of Her Majesty's Treasury, that they have received pressing requisitions from the Commander in Chief in the Pacific, as well as from the Controller of the Navy, as to the immediate necessity of providing a building at Esquimalt, Vancouver's Island, in which to place machinery, which has been sent out for the purpose of enabling defects in the engines of Her Majesty's ships, on that station, to be made good on the spot.

A sum of 1,000 *l.* was taken in the Estimates for 1865-66 for "Additional Buildings" at Esquimalt, and the exact appropriation of this amount did not come to their Lordships' knowledge until after the preparation of the Estimates for 1866-67, otherwise a like amount would have been provided to meet the requirements of this new station, where storehouses, a coal shed, and various other services have been found necessary.

The machinery having arrived on the spot, and being at present useless on account of there being no building in which to deposit it, and my Lords being desirous of avoiding the heavy expenses attending the repairs of engineer's defects at Victoria, as at present.

I am to request that you will move the Lords of the Treasury to authorise the construction of a building for a sum of 1,000 *l.*, which can be met out of the aggregate (Vote No. 11) without causing an excess.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

(N.)

Sir,

Treasury Chambers, 30 April 1866.

WITH reference to your letter of the 24th instant, I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, the approval of this Board of the temporary appropriation of the sum of 1,000 *l.*, out of the savings on Vote 11, for the purpose of erecting at Esquimalt, Vancouver's Island, a building for the reception of the machinery necessary for effecting repairs to the engines of Her Majesty's ships on that station.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. A. Hamilton.*

(O.)

Sir,

Admiralty, 20 July 1866.

I AM commanded by my Lords Commissioners of the Admiralty to acquaint you that additional storehouses are urgently required at Esquimalt, Vancouver's Island, for the safe custody and preservation of victualling stores and provisions now arriving and shortly expected to arrive from England, no provision being made for this service in the current year's Estimates.

My Lords propose, with the concurrence of the Lords Commissioners of Her Majesty's Treasury, to authorise an immediate outlay of 1,000 *l.*, for the construction of these buildings, and they have directed the Commander in Chief in the Pacific to institute a careful examination of all the navy buildings at Esquimalt, and forward in sufficient time for next year's Estimates such further services as may be essentially required.

The amount can be met out of the aggregate Vote this year, which will be ample to bear it, without incurring any excess.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

(O.)

Sir,

Treasury Chambers, 27 July 1866.

WITH reference to your letter of the 20th July, I am directed by the Lords Commissioners of Her Majesty's Treasury to request that you will convey to the Lords Commissioners of the Admiralty, the sanction of this Board of the sum of 1,000 *l.*, being the estimated expense of building new storehouses at Esquimalt, Vancouver's Island, being defrayed temporarily from the savings which may be effected on the aggregate Vote for the current year.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. W. Hunt.*

(P.)

Sir,

Admiralty, 5 March 1867.

WITH reference to your letter of April last, sanctioning the expenditure of a sum of 1,000 *l.* for a building for machinery, and your letter of the 27th July last, No. 12,230/66, sanctioning the expenditure of an additional sum of 1,000 *l.* for additional provision stores at Esquimalt; I am directed by my Lords Commissioners of the Admiralty to acquaint you that the coal wharf having broken down and the landing wharf being decayed and quite unsafe, it was deemed necessary to enter into immediate contracts for the performance of these works, which will be completed before the close of the financial year, causing an excess of 708 *l.* over the sums provided and authorised, as shown by the statements on the other side hereof; I am therefore to request you will move the Lords

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

Commissioners of Her Majesty's Treasury to sanction the excess, observing that the expenditure on the Naval Ordnance Store having been anticipated, the sum of 600 *l.*, taken for that service in the Estimates 1867-68, will not be required.

The Secretary of the Treasury.

I am, &c.
(signed) *H. G. Lennor.*

	£.	Expended and Liabilities incurred. £.
Sums voted for Repairs and Maintenance - - -	500	310
Authorised by Treasury :		
Building for Machinery - - - - -	1,000	622
Additional Provision Stores - - - - -	1,000	710
Naval Ordnance Store - - - - -	-	866
Re-constructing Wharfs - - - - -	-	700
TOTAL - - - £.	2,500	3,208

(P.)

Sir,

Treasury Chambers, 29 March, 1867.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to state, for the information of the Lords Commissioners of the Admiralty, with reference to your letter of the 5th instant, that my Lords approve of the temporary appropriation of the sum of 708 *l.*, being the excess over the Estimate, for certain works at Esquimalt Harbour, Vancouver's Island, out of the Savings on Vote 11, 1866-67, as requested.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. A. Hamilton.*

(Q.)

Sir,

Admiralty, 24 May 1866.

I AM commanded by my Lords Commissioners of the Admiralty, to request that you will move the Lords Commissioners of Her Majesty's Treasury to authorise a further expenditure of 500 *l.* to complete the new pier at the Cape of Good Hope, for which a sum of 500 *l.* was taken in the Estimates for the present financial year.

At the time of framing the present Estimates, it was supposed that no further expenditure was necessary than would be requisite for narrowing and completing the entrance to the basin, which is formed by the construction of the pier in question; but in the interim it appears that the action of the sea upon the unfinished side of the pier, which stands upon the sand, has seriously affected its solidity, whereby it has become necessary to rebuild a considerable portion, employing divers and others skilled artificers upon the work.

My Lords being desirous of giving directions for the immediate completion of the pier works, cranes, &c. &c., request that the Lords of the Treasury will authorise the amount in question being charged as an excess on the item in this year's Estimates, to be met by the probable surplus on the aggregate Vote for New Works; and they would be glad to be enabled to forward those directions to the captain in charge, by the mail of the 10th proximo, in order to prevent further damage to the pier.

The Secretary of the Admiralty.

I am, &c.
(signed) *W. G. Romaine.*

(Q.)

Sir,

Treasury Chambers, 1 June 1866.

WITH reference to your letter of the 24th May, E., I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, their Lordships' approval of a further expenditure of 500 *l.* being incurred for the completion of the new pier at the Cape of Good Hope, and of its being temporarily charged as an excess on the item for this service on Vote 11, to be met out of the probable surplus on the aggregate Vote.

The Secretary of the Admiralty.

I am, &c.
(signed) *H. C. E. Childers.*

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

(R.)

Sir,

Admiralty, 28 February 1867.

I AM commanded by my Lords Commissioners of the Admiralty to acquaint you, for the information of the Lords Commissioners of Her Majesty's Treasury, that they have received an application herewith from the Senior Naval Officer at the Cape of Good Hope, for a further sum of 500*l.* for the completion of certain works in connection with extending the basin and pier-head; as it would be obviously unwise to stop the completion of this work, my Lords have to request that the Lords of the Treasury will authorise the expenditure of 500 *l.* to complete this work, which sum it is proposed to charge as an excess on the item on the Estimates in 1866-67, and to be met by probable savings on the vote generally.

The Secretary of the Treasury.

I am, &c.
(signed) *H. G. Lennox.*

(R.)

Sir,

Treasury Chambers, 9 March 1867.

THE Lords Commissioners of Her Majesty's Treasury have had before them your letter of the 28th ult., requesting authority to charge the sum of 500 *l.*, which is required for the completion of certain works in connection with the Naval yard at the Cape of Good Hope, as an excess on the item in the Estimates for 1866-67, to be covered by probable savings on the Vote generally.

My Lords desire me to convey to you, for the information of the Lords Commissioners of the Admiralty, their approval of the temporary application of this sum as proposed.

The Secretary to the Admiralty.

I am, &c.
(signed) *George Ward Hunt.*

(S.)

Sir,

Admiralty, 10 August 1866.

THOUGH provision was made in the annual Estimates for 1866-67 for new machinery, requested by the local officers at Gibraltar, no representation was made until its purchase had been approved, that a building was required for its reception.

The Controller of the Navy states that this building is most necessary, and a plan and Estimate amounting to 1,529 *l.* has been submitted to the Lords Commissioners of the Admiralty for their approval, the work to be at once undertaken and completed within the financial year.

I am to request that the sanction of the Lords Commissioners of Her Majesty's Treasury may be given to this expenditure, and charged as an excess on contingencies; and to add that there will be a very considerable surplus on the aggregate Vote.

The Secretary of the Treasury.

I am, &c.,
(signed) *W. G. Romaine.*

(S.)

Sir,

Treasury Chambers, 17 August 1866.

WITH reference to your letter of the 10th August, I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, the approval of this Board of the expenditure of the sum of 1,529 *l.* in the erection of a building at Gibraltar to contain certain machinery, the machinery having been provided for in the Estimates of the current year, but not the building; the same to be a temporary charge against Vote 11.

I am to add that my Lords cannot refrain from expressing a hope that such instructions have been conveyed to the officer in command at Gibraltar, as will obviate the recurrence of such an omission for the future.

The Secretary of the Admiralty.

I am, &c.,
(signed) *G. A. Hamilton.*

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

(T.)

Sir,

Admiralty, 9 March 1867.

I AM commanded by my Lords Commissioners of the Admiralty to request you will inform the Lords Commissioners of Her Majesty's Treasury that, in the contract with Mr. Leather for the formation of the breakwater at Portland in 1852, certain buildings are stipulated to be taken by the Admiralty (on the valuation of the engineer in chief) from the contractor on the completion of his contract.

The contract having terminated, it became necessary to value these buildings, and it appeared to my Lords to be a desirable arrangement to include in the valuation other buildings, subsequently erected by Mr. Leather for the purpose of carrying out his contract, as being necessary to the Admiralty, either for the breakwater service, for the water supply and sick quarters for Her Majesty's fleet, and for coast-guard buildings.

In accordance with this view, all the buildings belonging to the contractor have been valued by the engineer in chief, and his valuation has been accepted by Mr. Leather, the whole amount being 5,185 £., which is considered very reasonable.

It is proposed to appropriate this amount as follows:—

	£.
1. For the buildings required for the breakwater - - -	2,150
2. For the buildings and reservoirs required for the supply of water to Her Majesty's fleet.	1,685
3. For sick quarters for Her Majesty's fleet - - -	675
4. For buildings for coast-guard stations - - -	675
TOTAL - - - £.	5,185

The 1st item will be chargeable to the Civil Service Vote of 7,000 £. for Portland Breakwater, which will not be exceeded.

The 2nd and 3rd items, amounting to 2,360 £., it is proposed to charge to the aggregate Vote No. 11, to be met out of the surplus on that Vote; and the 4th item will be chargeable to the Vote for the purchase and erection of coast-guard buildings (Vote No. 11), the provision for which will not be exceeded.

My Lords, therefore, request you will move the Lords of Her Majesty's Treasury to sanction the proposed purchase.

The Secretary of the Treasury.

I am, &c.
(signed) *W. G. Romaine.*

(T.)

Sir,

Treasury Chambers, 30 March 1867.

THE Lords Commissioners of Her Majesty's Treasury have had before them your letter of the 9th instant, requesting the sanction of this Board to the purchase from the contractor for the Portland Breakwater, of certain buildings erected by him, and for which he has agreed to accept 5,185 £., and proposing to distribute the charge as follows, viz.:—

	£.	
1. Building required for the breakwater -	2,150	To be charged to Civil Service Vote for Portland Breakwater.
2. Buildings, &c., required for the use of the fleet.	1,685	To be charged to the aggregate savings on Vote 11, 1866-67.
3. Sick quarters for fleet - - -	675	To be charged to aggregate savings on Vote 11, 1866-67.
4. Buildings for coast guard - - -	675	To be charged to the Vote for Coast Guard Service.
TOTAL - - - £.	5,185	

My Lords request that you will convey to the Lords Commissioners of the Admiralty their approval of the purchase of these buildings at the price named, and of the temporary appropriation of the sum of 2,360 £., out of the savings on Vote 11, to meet the cost of the buildings under heads Nos. 2 and 3.

The Secretary of the Admiralty.

I am, &c.
(signed) *G. A. Hamilton.*

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

(U.)

Sir,

Admiralty, 29 August 1866.

I AM commanded by my Lords Commissioners of the Admiralty to acquaint you, for the information of the Lords Commissioners of Her Majesty's Treasury, that a change in the occupancy of the official residences at the Admiralty having occurred, the time has arrived when the houses should be repainted and renovated; I am to observe that no thorough repair has been executed to any of them for the last seven years, but that in some instances partial repair has been done, in which cases it is not the intention now to do more than clean such parts.

The Estimate for the necessary works required will amount in all to 1,500 *l.* for the five residences, and as no provision was made to meet this expense in the sum provided this year for the general repairs and alterations to the public offices and official residences at the Admiralty, Whitehall, and Somerset House, I am commanded by my Lords to request that you will move the Lords Commissioners of the Treasury to express their concurrence in the expenditure of 1,500 *l.* in excess of this Vote, to be met out of the surplus anticipated on the aggregate Vote.

The Secretary of the Treasury.

I am, &c.
(signed) *H. G. Lennox.*

(U.)

Sir,

Treasury Chambers, 11 September 1866.

WITH reference to your letter of the 29th August, I am directed by the Lords Commissioners of Her Majesty's Treasury to convey to you, for the information of the Lords Commissioners of the Admiralty, the approval of this Board of the temporary application of the sum of 1,500 *l.* from the expected surplus on the aggregate Vote, to the repairs, &c., which are requisite to the official residences at the Admiralty.

The Secretary to the Admiralty.

I am, &c.
(signed) *G. A. Hamilton.*

(V.)

Sir,

Admiralty, 5 March 1867.

A SUM of 400 *l.* having been taken in the Estimates for the present year under head of "Foundations for Machinery for Works in connection with the Apparatus for Preserving Meat," at the Royal Victoria Yard, Deptford; and it having been found absolutely necessary, in the course of the works, to exceed the original Estimate by a sum of 623 *l.*, I am commanded by my Lords Commissioners of the Admiralty to request you will move the Lords Commissioners of Her Majesty's Treasury to sanction this excess to be charged to the Vote for Foundations for Machinery.

The Secretary of the Treasury.

I am, &c.
(signed) *Henry G. Lennox.*

(V.)

Sir,

Treasury Chambers, 19 June 1867.

I AM directed by the Lords Commissioners of Her Majesty's Treasury to state, for the information of the Lords Commissioners of the Admiralty, with reference to your letter (E.) of the 14th instant, that my Lords approve of the 623 *l.*, the amount of the excess over estimate of certain foundations for machinery at the Victoria Yard, Deptford, being charged temporarily to the Vote for "Foundations for Machinery, 1866-67," as suggested.

The Secretary of the Admiralty.

I am, &c.
(signed) *George Ward Hunt.*

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE,			ESTIMATE,			EXPENDITURE,					
	1866-67.			1866-67.			Less than Estimate.			More than Estimate.		
VOTE No. 12.												
MEDICINES AND MEDICAL STORES:	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.
Hospital and Infirmary Provisions and Stores -	41,125	12	2	35,400	-	-	-	-	-	5,725	12	2
Medicines and Surgical Instruments - - -	10,107	12	1	8,500	-	-	-	-	-	1,607	12	1
Subsistence, &c., of Seamen, at Sick Quarters, &c. -	16,650	6	-	15,100	-	-	-	-	-	1,550	6	-
Expenses of carrying out Contagious Diseases Act of 1864, and for Contributions for Lock Wards at the Out-ports - - - - -	14,400	16	2	15,500	-	-	1,099	3	10	-	-	-
Miscellaneous Disbursements, Medical Service -	1,397	14	6	1,500	-	-	102	5	6	-	-	-
				76,000	-	-	-	-	-	8,883	10	3
Abate: Medicines for Troop Ships, provided for } under Vote No. 17 - - - - - }	-	-	-	336	-	-	-	-	-	336	-	-
£.	83,682	-	11	75,664	-	-	1,201	9	4	9,219	10	3
Deficiency - - - £. 8,018 - 11				£. 8,018 - 11								
VOTE No. 13.												
MARTIAL LAW AND LAW CHARGES:												
Legal Department - - - - -	12,274	17	10	15,014	-	-	2,739	2	2	-	-	-
Courts Martial - - - - -	1,496	12	9	1,500	-	-	3	7	3	-	-	-
Naval Prison, Lewes - - - - -	2,857	11	1	2,891	-	-	33	8	11	-	-	-
Naval Prison, Malta - - - - -	363	7	-	-	-	-	-	-	-	363	7	-
Conveyance of Prisoners - - - - -	1,165	10	6	1,200	-	-	34	9	6	-	-	-
£.	18,157	19	2	20,605	-	-	2,810	7	10	363	7	-
Saving - - - - £. 2,447 - 10				£. 2,447 - 10								

Copy of Application made to Treasury,

(W.)

Sir,

Admiralty, 13 June 1866.

THE new Naval Prison at Malta, which has been in course of erection for some years past, being now near completion, my Lords Commissioners of the Admiralty think it desirable to make the necessary arrangements for the early occupation of the same, the experience gained from Lewes Naval Prison of the benefits arising from such an establishment making it most desirable, in their Lordships' opinion, to take the earliest opportunity of affording similar advantages to the discipline of the fleet on the Mediterranean station.

Although the prison at Malta will be ready for occupation by the end of August, my Lords do not anticipate that the full establishment will be required until the ensuing financial year, when the necessary provision will be inserted in the Estimates on the same proportionate scale, with reference to the number of prisoners as exists at the Naval Prison at Lewes, and my Lords will therefore only request the concurrence of the Lords Commissioners of Her Majesty's Treasury in the following provisional appointments for the remainder of the present financial year, viz.:-

One Governor, at 300 *l.* per annum, in addition to half-pay of his rank.
 One Chief Warder, at 5 *s.* 4 *d.* per diem, without rations.
 One Principal Warder, at 3 *s.* 8 *d.* " "
 Two Warders, at 3 *s.* 2 *d.* " "
 One Assistant Warder (cook) at 3 *s.* " "

The Secretary of the Treasury.

I am, &c.
 (signed) T. G. Baring.

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Excess: caused by increased Prices of Provisions, Coals, Bedding, &c., Medical Comforts and Medicines, as compared with previous years.

Excess: caused by increased prices of Medicines, owing to the alteration in the Pharmacopæia.

Excess: occasioned by additional Expenses incurred for Sick Quarters in China, over the amount provided for.

Surplus: caused by the amount voted for Extending the Hospital at Rochester not having been expended in consequence of the Tender for the Work having been so largely in excess of the amount anticipated.

Surplus: arising from the actual Expenditure having fallen short of the Estimate which was based on the average payments of previous years.

Credit: the Credits for the Service are included in the several detailed Items of the Vote.

Surplus: caused by the Law Charges having fallen short of the Estimate, which was based on the average Expenditure of the three preceding years.

Surplus: this is merely the difference between an Estimated and an actual Expenditure.

Surplus: caused by the Expenditure for Postage, Advertisements, &c., having been less than the Estimate, which was based on the Expenditure of previous years.

Excess: caused by the Staff of the New Prison having been organised at an earlier period than was anticipated; authorised by Treasury Letter 19 June 1866.

Surplus: this is merely the difference between an Estimated and an actual Expenditure.

and Treasury Reply thereto appended.

(W.)

Treasury Chambers, 19 June 1866.

Sir,

THE Lords Commissioners of Her Majesty's Treasury have had before them your letter of the 13th inst., submitting certain provisional appointments at the new Naval Prison at Malta; and I am directed by their Lordships to acquaint you that they approve of the following provisional appointments, as recommended by the Lords Commissioners of the Admiralty, viz. :—

One Governor,	at 300 l.	per annum	in addition to half-pay of his rank.
One Chief Warder	-	at 5 s. 4 d.	per diem, without rations.
One Principal ditto	-	at 3 s. 8 d.	" "
Two Warders	- - -	at 3 s. 2 d.	" "
One Assistant Warder (Cook),	at 3 s.	"	"

I am, &c.

The Secretary of the Admiralty.

(signed) Hugh C. E. Childers.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less," than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.
VOTE No. 14.				
MISCELLANEOUS SERVICES.				
Piloting and Towing Her Majesty's Ships - -	8,014 17 -	9,000 - -	985 3 -	- - -
Commanders in Chief, Expenses attendant on - -	3,845 13 11	4,000 - -	154 6 1	- - -
Passage Money and Conveyance of Officers, Seamen, } and Marines - - - - - }	56,589 - 1	45,050 - -	- - -	11,539 - 1
Telegraphic Communications, Expense of - -	6,347 5 11	6,400 - -	52 14 1	- - -
Compensation to Officers, &c., for Losses by Ship- } wreck, &c. - - - - - }	2,970 10 5	1,550 - -	- - -	1,420 10 5
Contributions in aid of Sailors' Homes - - -	475 - -	425 - -	- - -	50 - -
Contributions in aid of Religious and Charitable } Institutions - - - - - }	1,354 4 -	2,000 - -	645 16 -	- - -
Per-centage to Banks on Money remitted to Naval } Accountants - - - - - }	1,537 4 -	1,500 - -	- - -	37 4 -
Maintenance of a Floating Light-vessel at the } Warner - - - - - }	370 - -	370 - -	- - -	- - -
Medals for Seamen and Marines - - - -	24 10 10	100 - -	75 9 2	- - -
Rewards for Services against Pirates - - -	1,350 - -	1,350 - -	- - -	- - -
Stamps on Contracts, and on Officers' Commissions, } &c. - - - - - }	7,649 7 10	4,000 - -	- - -	3,649 7 10
Hire of Ships and Vessels - - - - -	50 8 6	200 - -	149 11 6	- - -
Assistance rendered to Her Majesty's Ships in distress	183 7 6	500 - -	316 12 6	- - -
Compensation for Damage done by Her Majesty's } Ships - - - - - }	2,336 11 11	4,000 - -	1,663 8 1	- - -
Gratuities for Wounds and for Special Services -	5,340 12 4	3,500 - -	- - -	1,840 12 4
Carried forward - - - £.	98,438 14 3	83,945 - -	4,043 - 5	18,536 14 8

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surpluses: arising from the actual Expenditure having been less than the Estimate, which was based upon the average payments of the three preceding years.

Excess: arising from the claims for Passages, &c. to and from the East and West India and China Stations having been more numerous than were estimated for, the provision being based upon the average Expenditure of preceding years.

Surplus: this is merely the difference between an estimated and an actual Expenditure.

Excess: arising from the Casualties having been unusually numerous, principally in connection with the loss of Her Majesty's ships "Amazon," "Griffon," and "Bulldog."

Excess: caused by a Donation of this amount towards building a new house at the Cork Sailors' Home.

Surplus: caused by fewer Contributions having been made in aid of Religious and Charitable Institutions than were provided for in the Estimate, which was based on the average payments of previous years.

Excess: arising from the actual Expenditure having exceeded the amount provided for this service, the Estimate having been based on the average Expenditure of the three preceding years.

Surplus: arising from fewer Medals having been granted than were provided for.

Excess: caused by more having been paid for Public Advertisements than was provided for in the Estimate, consequent upon increased contract business generally, and also by greater publicity being given to contracts.

Surpluses: arising from the actual Payments having fallen short of the Estimates, which were based on the average Payments of previous years.

Excess: arising from the Expenditure for Gratuities for wounds and injuries, and to persons discharged from the service not entitled to pensions, and for special services, having been greater than was provided for in the Estimate, which was based upon the average Payments of previous years.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 14— <i>continued.</i>	£. s. d.	£. s. d.	£. s. d.	£. s. d.
MISCELLANEOUS SERVICES— <i>continued.</i>				
Brought forward - - -	98,433 14 3	83,945 - -	4,043 - 5	18,536 14 8
Expense of Committees - - - - -	3,259 3 2	2,000 - -	- - -	1,259 3 2
Compensation to owners of Merchant Vessels for } providing Substitutes for Volunteers - - - }	66 8 -	250 - -	183 12 -	- - -
Books and Stationery for Schools - - - -	3,362 11 2	3,500 - -	137 8 10	- - -
Loss by Exchange, &c. - - - - -	3,173 3 -	4,000 - -	826 17 -	- - -
Lodging Allowances, &c., to Officers, &c., of Her } Majesty's Ships - - - - - }	7,161 4 6	4,050 - -	- - -	3,111 4 6
Expenses incurred in connection with visit of French } Fleet - - - - - }	22 11 -	- - -	- - -	22 11 -
Slaughter Houses, Pembroke Yard - - -	250 - -	750 - -	500 - -	- - -
Miscellaneous Payments and Allowances - -	8,363 10 11	7,455 - -	- - -	908 10 11
Interest on Naval Savings Banks Deposits - -	- 5 5	- - -	- - -	- 5 5
	124,097 11 5	105,950 - -	5,690 18 3	23,838 9 8
Deficiency - - -	£. 18,147 11 5		£. 18,147 11 5	
VOTE No. 15.				
HALF PAY, &c.				
Half Pay, Reserved, and Retired Pay - - -	689,247 16 5	701,708 - -	12,460 3 7	- - -
Saving - - -	£. 12,460 3 7		£. 12,460 3 7	

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Excess: arising chiefly from the Expense of Committees on Floating Obstructions, on Gun Cotton, and on the Contagious Diseases Act.

Surplus: arising from the actual Expenditure having fallen short of the Estimate which was based on the average payments of previous years.

Surplus: caused by the actual Expenditure having fallen short of the Estimate based on the average Expenditure of preceding years.

Surplus: caused by the net loss by Exchange having fallen short of the Estimate based on the results of previous years.

Excess: caused by the requirements of the service having necessitated a larger Expenditure than was anticipated, when the Estimate was framed.

Excess: being the Expenditure incurred in connection with the visit of the French Fleet, for which no provision was made in the Estimates, but which was directed to be borne by the Naval Department by Treasury Letter of 6 December 1865.

Surplus: owing to the Work having been delayed by non-completion of preliminary arrangements.

Excess: arising from the actual Expenditure having exceeded the amount provided for "contingencies" based upon the payments for previous years.

Excess: caused by the Savings Bank Act having come into operation subsequently to the Estimates being framed.

Surplus: caused by a less number of Officers having been placed on Half Pay than was provided for when the Estimate was framed.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 16.				
SECTION I.				
MILITARY PENSIONS AND ALLOWANCES:	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Pensions for good and meritorious services - -	6,055 10 4	6,150 - -	94 9 8	- -
Pensions for Conspicuous Bravery - - - -	208 - 3	200 - -	- -	8 - 3
Flag Officers' Retired Service Pensions - - -	1,500 - -	1,500 - -	- -	- -
Pensions to Commissioned and Warrant Officers -	34,474 9 8	33,546 - -	4,071 10 4	- -
Pensions to Relatives of Officers slain, &c. - -	10,426 14 7	10,718 - -	291 5 5	- -
Pensions to Widows of Naval Officers - - - -	146,906 1 9	155,090 - -	8,183 18 3	- -
Pensions to Widows of Marine Officers - - - -	10,413 11 1	11,470 - -	1,056 8 11	- -
Compassionate List - - - - -	15,784 - -	15,500 - -	- -	284 - -
Pensions to Old and Disabled Commissioned Officers	5,069 15 7	5,020 - -	- -	49 15 7
Pensions and Gratuities to Seamen and Marines -	289,482 7 3	284,710 -	- -	4,772 7 3
£.	520,320 10 6	528,904 - -	13,697 12 7	5,114 3 1
Saving - - -	£. 8,583 9 6		£ 8,583 9 6	
SECTION II.				
CIVIL PENSIONS AND ALLOWANCES:	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Pensions, Civil Salaried Officers - - - -	85,376 15 -	92,070 17 7	6,694 2 7	- -
Pensions, Civil Artificers, &c. - - - -	79,455 7 -	84,256 2 5	4,800 15 5	- -
Pensions, Civil Police, &c. - - - -	777 8 -	692 - -	- -	85 8 -
Pensions, Civil, Coast Guard - - - -	41,248 13 6	36,818 - -	- -	4,430 13 6
£.	206,858 3 6	213,837 - -	11,494 18 -	4,516 1 6
Saving - - -	£. 6,978 16 6		£. 6,978 16 6	

each of the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus: arising from fluctuations in the periods for which Pensions are claimed.

Excess: - ditto - - - ditto.

Surplus: occasioned by the deaths of Pensioners.

Surplus: caused by fluctuations in the period for which Pensions are claimed.

Surplus: occasioned by the death of Pensioners.

Surplus: - ditto - - - ditto.

Excess: arising from the Grants of the Compassionate Allowance having been greater than were provided for.

Excess: arising from fluctuation in the period in which Pensions are claimed.

Excess: occasioned by a large number of Pensioners having reverted to their Naval Out-Pensions, in October 1865, under the new regulations for the management of Greenwich Hospital, but for which number 15 l. a head a year will be paid into the Exchequer, out of the funds of Greenwich Hospital.

} Surpluses: arising from casualties by death, and fluctuation in the period in which Pensions are claimed.

Excess: occasioned by a greater number of men having been placed on the Pension List during the year than was anticipated when the Estimate was framed.

Excess: the list of civilians in the Coast Guard is in course of reduction, and their places are supplied by men in the effective service afloat.

EXPLANATORY STATEMENT of the Sums Expended, " More or Less " than those Estimated, under each of the

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 17.				
ARMY DEPARTMENT—CONVEYANCE OF TROOPS:	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Wages, Victuals, Coals, and Medicines for Her Majesty's Troop Ships - - - - - }	101,634 2 9	129,312 - -	27,677 17 3	- - -
Conveyance of Troops, Abroad and Homeward -	223,515 5 1	95,850 - -	- - -	127,665 5 1
Coals for Steam Transports and Freight Ships - -	6 16 -	- - -	- - -	6 16 -
Freight of Army and Ordnance Stores Abroad, and Homeward - - - - - }	54,384 17 4	49,500 - -	- - -	4,884 17 4
Intercolonial conveyance of Troops and Mess - -	45,897 18 4	31,820 - -	- - -	14,077 18 4
Intercolonial Freight of Army and Ordnance Stores	22,156 17 3	7,500 - -	- - -	14,656 17 3
Mess Allowance to Army Officers, &c., Abroad and Homeward - - - - - }	5,255 3 2	8,270 - -	3,014 16 10	- - -
Freight of Ships on short Services - - - - -	14,810 16 4	10,580 - -	- - -	4,230 16 4
Passage Money, Army - - - - -	47,599 1 7	42,000 - -	- - -	5,599 1 7
Fitting Transports and Freight Ships - - - - -	5,580 18 1	710 - -	- - -	4,870 18 1
Bedding and other Stores for Troops - - - - -	11,483 5 9	8,100 - -	- - -	3,383 5 9
Forage and other Stores for Horses - - - - -	1,462 12 7	100 - -	- - -	1,362 12 7
Carried forward - - -	533,787 14 3	383,742 - -	30,692 14 1	180,738 8 4

Subdivisions of the Votes included in the foregoing Statement, &c.—*continued*.

CAUSES OF VARIATION.

Surplus: owing to Her Majesty's Ship "Himalaya" not having been commissioned at the period expected, and to the Expenditure of Coals from this and other causes having been less than Estimated for.

Excess: arising from the reinforcements of Troops in British North America, and the removal of two regiments from China, and the reliefs consequent thereon at the Cape of Good Hope.

Excess: arising from repayment to War Office of expenses for Coaling Transports in prior years.

Excess: arising from the shipment of Army Stores to Canada.

Excess: arising from the local movements of Troops in New Zealand previous to embarkation for England, being greater than Estimated for.

Excess: arising from the repayment to the War Office of large disbursements by the Commissariat Officers in New Zealand; for local engagements of Freight of which no information had been received by the Admiralty when the Estimates were framed.

Surplus: the credit for Mess contributions received in the year being larger than Estimated for, viz.,

	£.	s.	d.
Credits brought to account	-	-	-
Credits per Estimate	-	-	-
	12,212	15	3
	5,440	-	-
	£. 6,772	15	3

This surplus has been diminished by increased Expenditure arising from the reinforcements of Troops in British North America, and the removal of two regiments from China, and the reliefs consequent at the Cape of Good Hope.

Excess: arising from the large movements of Troops between Great Britain and Ireland.

Excess: arising from the return of Officers to this country from New Zealand, and from reinforcements in British North America.

Excess: arising from the reinforcements of Troops in British North America, and the removal of two regiments from China, and the reliefs consequent thereon at the Cape of Good Hope.

Excess: larger purchases than Estimated for had to be made in consequence of the services specified under the head of "Conveyance of Troops."

Excess: arising from the reinforcements of Troops in British North America, and the removal of two regiments from China, and the reliefs consequent thereon at the Cape of Good Hope.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 17—continued.				
ARMY DEPARTMENT—CONVEYANCE OF TROOPS—continued.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Brought forward - - -	533,787 14 3	383,742 - -	30,692 14 1	190,738 8 4
Pay and Contingent Expenses of Agents for Trans- ports Afloat - - - - - }	2,703 16 2	2,210 - -	- -	493 16 2
Provisions, &c., for Troops - - - - -	44,639 13 7	16,836 - -	- -	27,803 13 7
£.	581,131 4 -	402,788 - -	30,692 14 1	209,035 18 1
Deficiency -	£. 178,343 4 -		£. 178,343 4 -	
BALANCES Irrecoverable - - - - - £.	1,079 14 1	- - -	- -	1,079 14 1

(X.)

Sir,

Admiralty, 15 October 1866.

I AM commanded by my Lords Commissioners of the Admiralty to request you will state to the Lords Commissioners of Her Majesty's Treasury, that a large deficiency on Vote 17, for the current financial year, will unavoidably accrue from the carrying out of several services of a special and urgent nature, for which no provision was made in the War Office programme of troop movements, upon which the estimate for the year was based.

The expense of these services, so far as it will fall on the vote for the current year, may be estimated at about 149,200*l*. The recent reinforcement of the troops in Canada, for which it has been considered expedient to employ steam conveyance; the movement of troops between this country and Ireland; from Hong Kong to the Cape, &c, has led to this unexpected expenditure; and at the present moment it cannot be stated with accuracy whether there will be any increase or diminution of the amount above named, especially as regards the removal of troops from New Zealand; but at a later period of the year, when the deficiency of the vote can be more nearly ascertained, an estimate for a supplementary vote will be prepared for Parliament. In the meantime, my Lords request the authority of the Lords of the Treasury for the increased expenditure.

The Secretary of the Treasury.

I am, &c.
(signed) W. G. Romaine.

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Excess: arising from the cost of advertising, travelling expenses and other contingencies of the Transport Establishment in New Zealand, being in excess of the Estimate under that head.

Excess: arising from the reinforcements of Troops in British North America, and the removal of two regiments from China, and the reliefs consequent thereon at the Cape of Good Hope; and from the transfer in this year to Vote 17 of the charge for the stock of provisions on board Her Majesty's Troop Ships, beyond the actual consumption provided for, in consequence of an alteration in the Estimates by which the cost of victualling both the crew and the troops on board Her Majesty's Troop Ships became chargeable to Vote No. 17.

The excess from these causes is reduced by the receipt of a larger credit for ration stoppages than was Estimated for, viz.:—

					£.	s.	d.
Credits brought to account	-	-	-	-	21,727	16	9
Credits per Estimate	-	-	-	-	17,104	-	-
					£. 4,623	16	9

Copy of Application made to Treasury, and Treasury Reply appended (*see below*).

For Balance due on the Cash Account of the Officer acting as Paymaster of Her Majesty's Gunboat "Cockchafer;" for a debt due to the Crown on the Cash Account of the second Master of Her Majesty's Ship "Haughty;" for deficiencies in the Cash Accounts of the late acting Paymaster of Her Majesty's Ship "Leopard," who deserted; for public money lost on the occasion of the wreck of Her Majesty's Ship "Griffon," and of the foundering of Her Majesty's Ship "Amazon," and for the passage money of a Consul at Tampico, who died on his way to England, found to be irrecoverable. On the other hand, the gross charge upon this head for the year 1866-67 of 1,105*l.* 2*s.* 9*d.* has been reduced by a credit amounting to 10*l.* 8*s.* 4*d.*, a portion of the amount written off as irrecoverable in the year 1865-66, on the Cash Account of the Assistant Paymaster in charge at Shanghai, now accounted for, and 15*l.* -*s.* 4*d.* Prize Money due to the late Assistant Paymaster of Her Majesty's Ship "Ringdove," appropriated in part payment of the amount written off as irrecoverable in the year 1865-66.

(X.)

Sir,

Treasury Chambers, 25 October 1866.

THE Lords Commissioners of Her Majesty's Treasury have had before them your letter of the 15th instant, stating that a large deficiency is expected on Vote No. 17, for Transport Services for the current year, and I am to request that you will inform the Lords Commissioners of the Admiralty that my Lords have received this intimation with much regret, but that, as they gather from your letter that no accurate estimate can at present be formed of the amount of the deficiency, they consider that it would be premature to express any opinion as to the manner in which it should be defrayed.

My Lords must, however, express their hope that the Board of Admiralty will find it possible to dispense with any further supplemental estimate, and that every endeavour will be made to reduce all unnecessary expenditure, so that if possible the expected deficiency may be met by the surplus that may arise on the aggregate Navy Votes.

My Lords are the more induced to anticipate the possibility of such an occurrence, as they observe by the Admiralty letter (E.) of the 15th instant, that a large surplus is expected on Vote 11.

The Secretary of the Admiralty.

I am, &c.
(signed) G. A. Hamilton.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each of

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 18.				
GREENWICH HOSPITAL:	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Salaried Establishment (Admiralty) - - -	1,261 12 6	1,159 - -	- -	102 12 6
Office of Comptroller of Greenwich Hospital Estates, &c. - - - - -	1,493 7 -	1,443 - -	- -	50 7 -
HOUSEHOLD AND INFIRMARY:				
Salaries - - - - -	7,172 17 8	6,921 - -	- -	251 17 8
Rates, Taxes, and Gas - - - - -	1,402 4 1	1,750 - -	347 15 11	- -
Contingencies - - - - -	1,973 3 8	2,560 - -	586 16 4	- -
Wages - - - - -	8,940 1 8	9,686 - -	695 18 4	- -
Repairs and Maintenance of Buildings - - -	4,920 10 5	4,657 - -	- -	263 10 5
Provisions, Clothing, Bedding, and Stores - - -	10,114 1 8	12,100 - -	1,985 18 4	- -
Medicines and Surgical Instruments - - -	489 4 3	900 - -	410 15 9	- -
Money Allowances to In-Pensioners - - -	3,031 1 10	3,000 - -	- -	31 1 10
Superannuation Allowances - - - - -	1,617 6 8	1,620 - -	2 13 4	- -
Miscellaneous Disbursements, &c. - - - - -	552 13 9	- - -	- -	552 13 9
PENSIONS:				
Pensions to Flag and other Officers - - -	3,698 10 6	5,490 - -	1,791 9 6	- -
Pensions to Seamen - - - - -	46,509 11 1	47,912 - -	1,402 8 11	- -
Gratuities to Widows of Seamen - - - - -	638 15 -	1,500 - -	861 5 -	- -
Carried forward - - - £.	93,815 1 9	100,648 - -	8,085 1 5	1,252 3 2

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Excess: occasioned principally by the employment of law stationer's clerks to prepare the Greenwich Pension Lists for 1,000 additional Pensioners.

Excess: arising from the allowance to the Comptroller of the Greenwich Hospital Estate for the services of a subordinate Clerk for the six months ended 31st March 1866, not having been paid until April 1866.

Excess: in consequence of the appointment of a Medical Inspector General, and increased pay and allowances to Medical Officers under Admiralty Circular W., 8th February 1867.

Surplus: arising from the rates having been paid out of Civil Service Votes from 1st April 1866, instead of being chargeable to the Greenwich Hospital Vote, as was contemplated when the Estimate was framed.

Surplus: principally arising from the Estimate for Washing being provided for 500 In-Pensioners, whereas the average number borne was only 368.

Surplus: arising from the number of Labourers estimated for not having been filled up, owing to the reduced number of the In-Pensioners.

Excess: arising from it having been found necessary to erect a Cooking Apparatus in the Infirmary Kitchen, for which no provision was made.

Surplus: the estimate being made for a complement of 500 In-Pensioners, whilst the average number borne was only 368.

Surplus: occasioned mainly by the reduced number of In-Pensioners borne.

Excess: this is merely the difference between an estimated and an actual expenditure.

Surplus: arising from fluctuations in the period in which these Superannuation Allowances are claimed.

Excess: gratuities to Officers on removal, and to Labourers and Nurses on discharge, no provision having been taken for this head of expenditure.

Surplus: arising from the Pensions brought to account being less than those provided for.

Surplus: in consequence of deaths of men who elected to leave Greenwich Hospital on 1st October 1865, who were entitled to money allowances.

Surplus: arising from the number of applicants having proved to be fewer than estimated.

EXPLANATORY STATEMENT of the Sums Expended, "More or Less" than those Estimated, under each

HEADS OF SERVICE.	EXPENDITURE, 1866-67.	ESTIMATE, 1866-67.	EXPENDITURE,	
			Less than Estimate.	More than Estimate.
VOTE No. 18— <i>continued.</i>	£. s. d.	£. s. d.	£. s. d.	£. s.
GREENWICH HOSPITAL— <i>continued.</i>				
Brought forward - - -	93,815 1 9	100,648 - -	8,085 1 5	1,252 3
GREENWICH SCHOOL:				
Salaries - - - - -	3,540 10 5	3,591 - -	50 9 7	-
Rents, Taxes, and Gas - - - - -	562 18 7	729 - -	166 1 5	-
Contingencies - - - - -	2,035 2 1	2,536 - -	500 17 11	-
Wages - - - - -	3,409 15 6	3,393 - -	-	16 15
Repairs and Maintenance of Buildings - - -	1,313 5 3	1,500 - -	186 14 9	-
Provisions, Clothing, Bedding, and Stores - -	10,531 14 5	12,650 - -	2,118 5 7	-
Medicines and Surgical Instruments - - -	- - -	100 - -	100 - -	-
Superannuation Allowances - - - - -	237 - 7	220 - -	-	17 -
£.	115,445 8 7	125,367 - -	11,207 10 8	1,285 19
Saving - - -	£. 9,921 11 5		£. 9,921 11 5	

the Subdivisions of the Votes included in the foregoing Statement, &c.—*continued.*

CAUSES OF VARIATION.

Surplus: arising from the Retirement of one of the Masters, and the appointment of another at a lower rate of Salary.

Surplus: the Poor Rates at Greenwich Hospital being paid out of the Civil Service Votes from 1st April 1863, instead of being chargeable to the Greenwich Hospital Vote, as contemplated when the Estimate was framed.

Surplus: in consequence of the Expenditure on account of Books, Stationery, and Washing, having been less than the Estimate.

Excess: arising from the appointment of an additional Labourer.

Surplus: caused by a Contractor's Claim, for Work done in 1866-67, not having come in course of payment during the financial year.

Surplus: occasioned by the Estimate being made in anticipation of a rise in the price of Meat, which did not take place, and also in consequence of the claims generally having come in course of payment for three quarters of the financial year only.

Surplus: the Medicines for the School Infirmary having been supplied out of the General Infirmary Store.

Excess: arising from the Superannuation of one of the Masters.

BALANCE SHEET, showing the LEDGER BALANCES on the 30th September 1867, the Date on which the Annual Account of NAVAL RECEIPT and EXPENDITURE was closed;—also, the Proportion of the AVAILABLE BALANCE remaining on that Day applicable to the still open Account of 1867-68; and the amount of the Excess of Expenditure on the Grants for 1866-67, as stated in the Account.

N.B.—To obviate the necessity of introducing into the following Statement the separate results of all the Accounts, the Balances in the Ledger are shown in *Classes*, except in those instances in which it has been deemed advisable to add special explanations, with the view of illustrating the principle upon which the Account has been prepared, and the final Balance struck. The Account of Receipt and Expenditure is one of Receipts and Payments within the Year, and has been kept open for Six Months after the Expiration of the Year to which it refers, under the authority of Parliament, that all Payments posted within that period, relating to the service of the past year, might be included in it, and the whole Expenditure on Imprest be finally audited before declaring the Balance. The postings of the Receipts and Payments comprised in that Account being therefore spread over a period of Eighteen Months, the proof of the correctness of the Expenditure, as compared with the Grants of 1866-67, may be shown either by the Balances which remained in the Books at the date to which the Account of Receipt and Expenditure extends (*viz.*, 31st March 1867), or by those which remained at the Date when it was definitely closed (*viz.*, 30th September 1867). The Balance Sheet of the latter Date is given, as it exhibits a more complete Statement of the Accounts.

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.			Cr.		
		£.	s.	d.	£.	s.	d.
1	HER MAJESTY'S EXCHEQUER: For Balance of Grants for the Naval Service unissued on the 30th September 1867 - - - - -	5,851,253.	-	-	-	-	-
1	HER MAJESTY'S EXCHEQUER (Greenwich Hospital Account): For Balance of Grants for the Service of Greenwich Hospital and School, unissued on the 30th September 1867 - - - - -	154,002	-	-	-	-	-
1	HER MAJESTY'S EXCHEQUER (Old Store and Extra Receipt Moneys' Account): There is no Balance on this Account, the transfer bill to the Exchequer being charged in the Ledger to the debit of the Account simultaneously with the transfer of the Credits on account of the Naval Old Store and Extra Receipt Moneys from their respective heads - - - - -	-	-	-	-	-	-
1	HER MAJESTY'S PAYMASTER GENERAL (Cash): For Navy Cash Balance on the 30th September 1867 - - - - -	50,725	-	5	-	-	-
1	BILLS PAYABLE: For Bills issued for Payment, but remaining unpaid on the 30th September 1867 - - - - -	-	-	-	625,128	14	4
1	OUTSTANDING BILLS, DRAFTS, &c.: For Bills drawn by Accounting Officers not presented for payment, and which have been outstanding for more than six years - - - - -	-	-	-	4,628	3	11
1	SALARY LISTS: For amount of Salaries on account of the Naval Department unpaid or paid, but included in Accounts not passed on the 30th September 1867 - - - - -	-	-	-	125,409	12	2
1	PRIZE REMITTANCES: For Payments of Prize Money by Naval Accountants, the Repayments on account of which from Prize Funds were not brought to account in the Ledger on the 30th September 1867 - - - - -	24	9	6	-	-	-
1	GREENWICH HOSPITAL INCOME ACCOUNT: For Receipts due to Greenwich Hospital Funds for the Freight of Treasure, &c., in Her Majesty's Ships, &c., the Payments transferring which, to those Funds, were not brought to account in the Ledger on the 30th September 1867 - - - - -	-	-	-	1,091	15	8
1	SICK MESS FUND: For Value of the Savings of Rations of Seamen on board Her Majesty's Ships while on the Sick List, from which a fund is formed for the purchase of medical comforts - - - - -	-	-	-	6,240	12	-
10	- - - - - Carried forward - - - - - £.	6,056,004	9	11	762,498	18	1

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.	Cr.
		£. s. d.	£. s. d.
10	Brought forward - - -	6,056,004 9 11	762,498 18 1
1	PROPERTY AND INCOME TAX: For Deductions on account of the Naval Department remaining to be paid to the Receiver General of Inland Revenue (Stamps and Taxes) - - -	- - -	3,565 18 8
1	DEPOSITS FOR MARINE OFFICERS' EQUIPMENTS: For Amount of Outstanding Deposits on account of the outfit of Gentlemen Cadets at the Royal Naval College, Portsmouth, previous to their receiving Commissions in the Royal Marines, the Accounts for the Disbursements of such Deposits not yet having been allowed - - -	- - -	1,315 9 7
5	CREDITS OF MARINES: For Balance of Deposits by Marines in the hands of the Divisional Paymasters, and standing to their Credit in the Marine Ledger -	- - -	2,045 6 6
6	CREDITS OF HOSPITAL PATIENTS: For Value of Money and Effects of deceased and other Patients in Haslar, Plymouth, Haulbowline, Yarmouth, Jamaica, and Greenwich Hospitals, taken on public charge by the Accountant Officers of those Establishments until claimed - - -	- - -	774 4 7
1	CREDITS OF PRISONERS, LEWES PRISON: For Value of Money belonging to Prisoners taken in charge by the Governor of Lewes Naval Prison - - -	- - -	16 4 10
1	WAGES TO GREENWICH HOSPITAL PATIENTS: For Amount of Wages due to deceased Patients of Greenwich Hospital remaining to be paid over to their legal representatives - - -	- - -	16 12 10
1	NAVAL SAVINGS BANKS: For Deposits in Naval Savings Banks by Seamen and Marines of the Royal Navy - - -	- - -	3,171 15 2
7	MARINE DIVISIONAL PAYMASTERS: For Balances standing as Imprests, &c. against them on the 30th September 1867 - - -	217,088 - 3	—
31	NAVAL AND VICTUALLING CASHIERS, STOREKEEPERS, AND ACCOUNTANTS, HOSPITAL AGENTS, PACKET AGENTS, AND PAYMASTER OF ADMIRALTY CONTINGENCIES, &c. AT HOME: For Balances, as above - - -	1,477,167 15 3	—
41	NAVAL AND VICTUALLING STOREKEEPERS AND ACCOUNTANTS, AND HOSPITAL INSPECTORS, &c., ABROAD: For Balances standing as Imprests, &c. against them, and Credit Balances on the 30th September 1867 - - -	352,890 19 5	19 16 10
31	RECRUITING OFFICERS: For Balances as above - - -	8,369 8 1	5 - -
7	CONSULS' ACCOUNTS: For Balances standing as Imprests, &c. against them on the 30th September 1867 - - -	229 8 6	—
25	PAYMASTERS OF COAST GUARD DISTRICTS ON SHORE: For Balances standing as Imprests, &c. against them, and Credit Balances on the 30th September 1867 - - -	219,561 6 4	1 18 10
168	Carried forward - - - £	8,331,311 7 9	773,431 5 11

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.			Cr.		
		£.	s.	d.	£.	s.	d.
168	- - - - - Brought forward - - -	8,331,311	7	9	773,431	5	11
16	PAYMASTERS OF ROYAL NAVAL RESERVE DRILL SHIPS:						
	For Balances standing as Imprests, &c. against them on the 30th September 1867 - - - - -	22,872	8	2	—		
457	PAYMASTERS OF HER MAJESTY'S SHIPS AND VESSELS:						
	For Balances standing as Imprests, &c. against them, and Credit Balances on the 30th September 1867 - - - - -	414,893	8	—	37,672	14	5
19	MISCELLANEOUS ACCOUNTANTS:						
	For Balances as above - - - - -	3,668	14	2	—	13	—
1	PRIVATE INDIVIDUALS (FOR LABOUR PERFORMED AT THE DOCK-YARDS):						
	For Wages of Dockyard Workmen employed on behalf of Private Individuals in the repair of Vessels, &c., not yet repaid - - -	1,177	1	9	—		
1	J. LAMONT, HONG KONG (ON BEHALF OF THE WHAMPOA DOCK COMPANY):						
	For Balance of Amounts advanced on the 11th February 1864 and 29th March 1866, to assist him in the construction of a Dock at Aberdeen, Hong Kong - - - - -	11,092	16	—	—		
1	A. GABRIELLI, CONTRACTOR, CHATHAM:						
	For Advances under his Contract, to be repaid by instalments, on account of Plant in use for the Extension Works at Chatham -	12,800	—	—	—		
1	LEATHER, SMITH & Co., CONTRACTORS, PORTSMOUTH:						
	For Advances under their Contract, to be repaid by instalments, on account of Plant in use for the Extension Works at Portsmouth	20,000	—	—	—		
1	TREASURY CHEST ADVANCE ACCOUNT, 1866-67:						
	For Balance due by the Naval Department on account of Advances from the Chests in the Colonies for Naval Services, in the Year 1866-67 - - - - -	—	—	—	10,246	—	9
1	TREASURY CHEST ADVANCE ACCOUNT, 1867-68:						
	For Amount outstanding on the Repayments by the Naval Department on account of Advances from the Chests for Naval Services, in the Year 1867-68 - - - - -	420,000	—	—	—		
1	TREASURY CHEST ACCOUNT, 1867-68:						
	For Amount of Advances from the Chests on account of Naval Services, as per Advices received for the Year 1867-68, not yet claimed - - - - -	—	—	—	281,277	19	10
6	TREASURY:						
	For the following Balances, viz.:						
	1. For Balance due on account of Advances in 1866-67 and 1867-68, for Magnetic and Meteorological Observations at Greenwich and the Cape of Good Hope - - - - -	1,116	13	1	—		
673	- - - - - Carried forward - - - £.	9,238,932	8	11	1,102,628	13	11

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.			Cr.		
		£.	s.	d.	£.	s.	d.
673	- - - - - Brought forward - - -	9,238,932	8	11	1,102,628	13	11
	TREASURY—continued.						
	2. For Advances by the Naval Department in 1866-67 and 1867-68, for Works at the Harbour of Refuge at Portland - -	5,849	15	-			
	Abate,—	£.	s.	d.			
	For Amount due to the Treasury for value of Stone supplied from the Harbour Works at Portland, for the service of New Works, &c., at the Dockyards and Marine Barracks in Lady and Midsummer Quarters, 1867 - -	905	11	9			
	For Rents of Premises, &c., in the neighbourhood of the Harbour of Refuge at Portland - -	968	4	6			
		1,873	16	3			
		3,975	18	9			
	3. For Balance remaining of Amount received from the Treasury in the Year 1855, to be distributed amongst the Officers and Crew of Her Majesty's Ship "Investigator," for their Services in the Arctic Seas - - - - -					58	2 10
	4. For repayment to Naval Funds of the value of Provisions supplied to Dr. Livingstone and Men on board Her Majesty's Ship "Penguin" in March 1866, in connection with the exploration of the River Zambesi, the charge for which was not brought to account in the Ledger on 30th September 1867 - - - - -					14	17 8
	5. For Advances by the Naval Department in the Year 1867-1868 on account of the expedition despatched under Mr. E. D. Young, Gunner, Royal Navy, to search for Dr. Livingstone - - - - -	198	18	11			
	6. For Advances out of Naval Grants on account of the Entertainment of Diplomatic Officers, &c., on board Her Majesty's Ships - -	47	10	-			
	For Freight, Salvage, &c., of Treasure; Presents to Native Chiefs on the West Coast of Africa; Victualling Distressed British Subjects; Provisions, &c., supplied for the use of Convict Establishments in Western Australia; and Miscellaneous Charges -	380	8	8			
	Abate,—	£.	s.	d.			
	Amount transferred for the Entertainment of Diplomatic Officers, &c., on board Her Majesty's Ships, the charges for which are not yet brought to account - -	43	14	10			
	Amount refunded by Messrs. Burns and Melver, of Liverpool, for freight of Biscuit to Constantinople, for use of Distressed Circassians - - - -	10	10	-			
		54	4	10			
		373	13	10			
673	- - - - - Carried forward - - - £.	9,243,481	-	5	1,102,701	14	5

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.			Cr.		
		£.	s.	d.	£.	s.	d.
673	- - - - - Brought forward - - -	9,243,481	-	5	1,102,701	14	5
1	HOME DEPARTMENT (CONVICT SERVICE ACCOUNT):						
	For Balance due for Advances out of Naval Grants, on account of the Expense of the Transportation of Convicts in 1867-68 -	5,555	4	2	—		
1	SECRETARY OF STATE FOR WAR (MISCELLANEOUS ACCOUNT):						
	For value of Provisions, Bedding, &c., supplied for the Commissariat Service, for Garrisons Abroad, and for the service of Troops on shore, in the year 1866-67 - - - - -	14,756	6	—			
	For Moiety of Expenses in connection with the Committee on the Venereal Disease - -	1,650	8	11			
	For Boat-hire, Lighterage, Stowing, and other similar charges incurred in connection with Army Provisions and Stores - - -	2,571	13	5			
	For Wages of Dockyard Workmen in the years 1865-66 and 1866-67, employed on Service of the War Department - - - - -	7,568	2	5			
	For Ordnance Stores purchased for Her Ma- jesty's Ships - - - - -	989	7	8			
	For House Allowance to the Boat's Crew of the Harbour Master at Devonport, whose house has been appropriated for Army Services; for Allowance to the Naval Storekeeper at Esqui- malt, for charge of Ordnance Stores; for Gas supplied for Service of War Department; for Army Pensions paid by Naval Accountants; and for numerous other Miscellaneous Charges	876	19	1			
	Abate,—	28,412	17	6			
	For Amount recovered for Bounty to Marines Fraudulently enlisted in the Line; for Arms damaged, lost by neglect, &c.; for Demurrage of Lighters, Sale of War Office Stores, &c. -	660	8	5			
		27,752	9	1	—		
1	SECRETARY OF STATE FOR WAR (GREENWICH OUT - PENSION ACCOUNT):						
	For Advances on account of Payments for Greenwich Out Pen- sions, in 1867-68 - - - - -	100,000	—	—	—		
1	SECRETARY OF STATE FOR FOREIGN AFFAIRS:						
	For Advances out of Naval Grants on account of the Passages of Consular Officers, &c. -	1,052	14	9			
	For Amount paid into the hands of the Consul at Newchang, by the Officer in Command of a Detachment of Royal Marines there - - -	329	7	6			
		1,382	2	3			
	Abate,—						
	For amount transferred for the Passages of Con- sular Officers, &c., the Charges for which are not yet brought to account - - - - -	266	19	5			
		1,115	2	10	—		
677	- - - - - Carried forward - - - £.	9,377,903	16	6	1,102,701	14	5

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.			Cr.		
		£.	s.	d.	£.	s.	d.
677	- - - - - Brought forward - - -	9,377,903	16	6	1,102,701	14	5
1	COLONIAL DEPARTMENT:						
	For Advances out of Naval Grants on account of the Passages, &c. of Officers connected with the Colonial Department in the Colonies -	458	5	1			
	For Advances on account of the Moiety of the Expenses of Building Dredging Vessels and Mud Pontoons, and constructing Wharf Walls, &c. at Malta Harbour - - - - -	12,107	15	1			
	For Advances out of Naval Grants on account of the Conveyance of Stores to Vancouver's Island -	518	1	1			
	For Conveyance of Troops in November 1865 from Charlotte Town to Halifax, Nova Scotia -	300	-	-			
	For excess of Advances by the Naval Department on account of the Coast Surveys in progress in Australia, a portion of the expense of which is chargeable to the Colonial Government -	865	19	-			
	For Wages of Dock Yard Artificers employed fitting the "Nelson" for Sea, for the Government of the Colony of Victoria - - - -	1,688	11	-			
	For Provisions and Stores supplied to Colonial Steamers, and other Miscellaneous Charges -	314	10	11			
	Abate,—	16,253	2	2			
	For Amount transferred for the Passages, &c. of Officers connected with the Colonial Department, &c., the Charges for which are not yet brought to account - - - - -	351	6	6			
					15,901	15	8
1	SECRETARY OF STATE FOR INDIA IN COUNCIL (OVERLAND TROOP SERVICE ACCOUNT):						
	For Advances out of Naval Grants to defray the Expenses of the five Troop Transports, "Malabar," "Jumna," "Euphrates," "Serapis," and "Crocodile," constructed for the East India Government, under the superintendence of the Admiralty -	156,956	13	5			
1	SECRETARY OF STATE FOR INDIA IN COUNCIL (MISCELLANEOUS ACCOUNT):						
	For Advances out of Naval Grants on account of the Hire and Fittings, &c. of Transports and Freight Ships employed in conveying Troops to India; also for Supplies of Provisions and Stores for the same, from 1857 to the present time - - - - -	77,778	3	6			
	For Advances of Cash to Officers of the Indian Navy on the China Station, from 1860 to the present time - - - - -	38,055	-	8			
	For Advances out of Naval Grants on account of the Entertainment of Lord Elgin on board the "Feroze," Indian Navy - - - - -	1,346	17	3			
	For Advances out of Naval Grants on account of Repairs executed at Hong Kong to the "Coromandel," "Sydney," and "Tonge," Ships of the Indian Navy - - - - -	400	18	10			
	For other Miscellaneous Charges - - - - -	51	7	3			
	Abate,—	117,632	7	6			
	For Entertainment of Officers of the Indian Government on board Her Majesty's Ships, the Charges for which are not yet brought to account - - - - -	55	17	6			
					117,576	10	-
680	- - - - - Carried forward - - - £.	9,668,338	15	7	1,102,701	14	5

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.			Cr.		
		£.	s.	d.	£.	s.	d.
680	- - - - - Brought forward - - -	9,668,338	15	7	1,102,701	14	5
1	POST OFFICE DEPARTMENT (PACKET SERVICE ACCOUNT): For Advances out of Naval Grants on account of Salaries of Agents, and other Incidental Charges in 1867-68 - - - -	1,940	18	10	—		
1	POST OFFICE DEPARTMENT (MISCELLANEOUS ACCOUNT): For Advances out of Naval Grants on account of Passages of Officers belonging to the Post Office Department in 1867-68 -	13	—	—	—		
1	BOARD OF TRADE (ROYAL NAVAL RESERVE ACCOUNT): For Advances out of Naval Grants on account of Expenses in- curred for the Royal Naval Reserve in 1867-68 - - - -	40,000	—	—	—		
1	BOARD OF TRADE (MARINE DEPARTMENT): For Advances out of Naval Grants on account of the Supply, Freight, &c., of Lighthouse Stores, and for expenses incurred on account of the subsistence and care of Distressed British Seamen	148	12	3	—		
1	DIRECTORS OF CONVICT PRISONS: For Value of Provisions supplied for Convict Service, &c., in 1866-67 and 1867-68 - - - - -	698	5	9	—		
1	COMMITTEE OF PRIVY COUNCIL ON EDUCATION: For Advances out of Naval Grants to meet Expenses in connection with the School of Naval Architecture at South Kensington 1866-67 - - - - -	713	2	2	—		
1	COMMISSIONERS OF HER MAJESTY'S WORKS: For Advances out of Naval Grants on account of Timber supplied to Her Majesty's Dock Yard at Portsmouth - - - - -	66	5	1	—		
1	OFFICE OF PUBLIC WORKS IN DUBLIN: For Advances out of Naval Grants to meet the Expenditure on Coast Guard Buildings in Ireland in 1867-68 - - - - -	7,000	—	—	—		
1	THE LORD HIGH ADMIRAL OR COMMISSIONERS OF THE ADMIRALTY FOR THE TIME BEING, ON ACCOUNT OF COLONIAL DOCKS: For Advances made to Naval Funds out of the Consolidated Fund for the purpose of Loans under the Colonial Docks Loan Act, 1865, 28 & 29 Vict. c. 106 - - - - -	—	—	—	11,512	16	—
1	SCIENCE AND ART DEPARTMENT: For Repayment to Naval Funds on account of Payments in 1868-69, for Wages of Workmen employed in Models, &c., for the Paris Exhibition, not yet brought to account - - - - -	—	—	—	437	6	1
1	BOARD OF CUSTOMS: For Advances out of Naval Grants for Supplies, &c., to Revenue Cruisers, Vessels employed in Quarantine Service, &c. - - -	71	3	5	—		
691	- - - - - Carried forward - - - £.	9,718,990	3	1	1,114,651	16	6

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.		Cr.	
		£.	s. d.	£.	s. d.
691	- - - - - Brought forward - - -	9,718,990	3 1	1,114,651	16 6
1	FRENCH GOVERNMENT: For Advances out of Naval Grants on account of Provisions, Coals, and Stores supplied to French Ships of War - - -	3,421	14 7	—	
1	ITALIAN GOVERNMENT: For Advances out of Naval Grants for Expenses of recovering Anchor of the "Marietta Gaterno" at Devonport, in Lady Quarter 1866 - - - - -	1	16 2	—	
1	SPANISH GOVERNMENT: For Advances out of Naval Grants for repairing Anchor of the "Gerona" at Devonport, in Christmas Quarter 1865 - - -	—	14 3	—	
1	TURKISH GOVERNMENT: For Advances out of Naval Grants in the Year 1866-67, for Expenses of Officers of Her Majesty's Dockyards, Surveying, &c., Ships of the Turkish Government - - - - -	17	3 7	—	
1	HANSEATIC GOVERNMENT: For Advances out of Naval Grants for Wages of Men employed on relief of the Emigrant Ship "Hertha," and for raising private Moorings in 1865-66 and 1866-67 - - - - -	31	16 3	—	
1	PRUSSIAN GOVERNMENT: For Advances out of Naval Grants for repairs to Prussian Corvette "Nympha" at Devonport, in Michaelmas Quarter 1865 - - -	3	12 11	—	
1	EGYPTIAN GOVERNMENT: For Advances out of Naval Grants for the Travelling Expenses of Dockyard Officers inspecting Ships building for the Egyptian Government in 1864-65 - - - - -	13	6 -	—	
1	DUTCH GOVERNMENT: For Advances out of Naval Grants for Expense of attending the "Watergeen" into Harbour at Portsmouth, in Christmas Quar- ter 1865 - - - - -	—	9 9	—	
1	UNITED STATES GOVERNMENT: For Advances out of Naval Grants for Expense of repairing the "Miantonomoh" at Sheerness, in Michaelmas Quarter 1866 - -	18	5 9	—	
1	AUSTRIAN GOVERNMENT: For Advances out of Naval Grants for repairing the "Kaiser Max," Austrian Frigate, at Devonport, in Midsummer Quarter 1865 -	—	16 -	—	
1	CHINESE GOVERNMENT: For Advances out of Naval Grants on account of Expenses incurred at Hong Kong, in Lady Quarter 1863, for building a Maga- zine for Stores belonging to the Chinese Government on board the Transport "Orient" - - - - -	57	5 10	—	
1	CHINESE GOVERNMENT (ANGLO-CHINESE FLOTILLA ACCOUNT): For Advances out of Naval Grants on account of Expenses con- nected with the Sale, &c., of Vessels belonging to the Anglo- Chinese Flotilla - - - - -	103	6 4	—	
703	- - - - - Carried forward - - -	9,722,660	10 6	1,114,651	16 6

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	Dr.	Cr.
703	- - - - - Brought forward - - -	9,722,660 10 6	1,114,651 16 6
1	DANISH GOVERNMENT:		
	For Advances out of Naval Grants on Account of the Pay of two Danish Officers serving in Her Majesty's Navy in 1866-67 - -	374 9 -	-
1	SWEDISH GOVERNMENT:		
	For Advances out of Naval Grants on Account of the Wages of Dock Yard Artificers, &c., employed on Service of the Swedish Government in 1866-67 : - - - - -	22 18 4	-
1	PORTUGUESE GOVERNMENT:		
	For Advances out of Naval Grants in 1866-67, on Account of the Travelling Expenses of a Dock Yard Officer surveying a Portuguese Corvette - - - - -	4 4 -	-
1	DONATION WAR BATTALION TO MARINE BRIGADE IN CHINA:		
	For Balance remaining unpaid out of Amount received from the War Department on Account of the difference between Indian and Imperial Pay and Allowances to Marine Officers, &c., in China - - - - -	- - -	481 5 9
1	EAST INDIA WAR BATTALION MONEY:		
	For Balance remaining unpaid out of Amount received from the East Indian Government for distribution amongst the Officers and Seamen of Her Majesty's Ships employed in the Naval Brigade in India - - - - -	- - -	663 - 1
1	KAHDING PRIZE MONEY ACCOUNT:		
	For Balance remaining out of the Naval Share of the Booty captured from the Taepings at Kahding by the combined French, Chinese, and British Forces - - - - -	- - -	77 18 1
1	CRIMEAN FIELD ALLOWANCE ACCOUNT:		
	For Balance remaining unpaid out of Amount received from the War Department for the Payment of Field Allowance to Marines employed in the Crimea - - - - -	- - -	4 5 6
18	OLD STORE AND EXTRA RECEIPT MONIES ACCOUNT:		
	For Receipts on Account of the Sale of Unserviceable Naval Stores, and for Supplies of Serviceable Naval Stores, &c., to other Departments of Government, paid over Quarterly to the Exchequer; and debit Balance under the detailed head of "Miscellaneous Receipts" - - - - -	338 5 9	74,136 18 -
	NET AVAILABLE BALANCE on 30 September 1867 -	- - -	8,533,384 18 8
728		£. 9,723,400 2 7	9,723,400 2 7

Number of Accounts.	DESCRIPTION OF ACCOUNTS.	AMOUNT.
728	Net available Balance on the 30th September 1867	£. s. d. 8,533,384 18 8
As the foregoing Balances include Sums belonging to the Account for the Year 1867-68, the following Statement of the Amount due on the Grants for that Year is given, in order to show the state of the Grants for 1866-67 on the 30th September 1867, when the Account for that Year was closed, viz. :—		
	Grants for Naval Services for the Year 1867-68, per Act 30 & 31 Vict. c. 120, s. 25	£. s. d. 10,976,253 - -
	Grants for Advances for Greenwich Hospital and School, per Act 30 & 31 Vict. c. 120, s. 22	128,635 - -
		11,104,888 - -
211	Deduct,—Net Expenditure for Naval Services for the Year 1867-68, passed to Account up to the 30th September 1867, the Date when the preceding Balances were struck	2,467,817 7 10
23	Net Expenditure for Greenwich Hospital and School Services for the Year 1867-68, passed to Account up to the 30th September 1867, the Date when the preceding Balances were struck	22,987 11 2
		2,490,804 19 -
	Net Amount due on the Grants for 1867-68	8,614,083 1 -
NET EXCESS of EXPENDITURE beyond the Grants for 1866-67, viz. :—		
	Net Excess of Expenditure beyond the Grants for Naval Services for the Year 1866-67 to be provided for	90,619 13 9
	Abate,—Unappropriated Balance of Grants for Greenwich Hospital and School Services for the Year 1866-67	9,921 11 5
		80,698 2 4
The same result may be obtained from the Balance Account ended 31st March 1867, viz. :—		
	Net available Balance on Grants for Naval Services for 1866-67 on the Books on 31st March 1867	£. s. d. 4,288,491 2 1
	Ditto - - on Grants for Advances for Greenwich Hospital and School for 1866-67, on the Books on the 31st March 1867	83,836 4 11
		4,372,327 7 -
	Net Expenditure for Naval Services for the Year 1866-67, passed to Account subsequently to the 31st March 1867, when the preceding Balances were struck	4,379,110 15 10
	Ditto - - for Greenwich Hospital and School Services, ditto	73,914 13 6
		4,453,025 9 4
962	NET EXCESS of EXPENDITURE beyond the Grants for 1866-67, as before	£. 80,698 2 4

J. Beeby,
Accountant General of the Navy.

(Examined) H. T. D. Bathurst.

N A V Y.

1866-67.

STATEMENT of the SAVINGS and DEFICIENCIES upon the GRANTS for NAVY SERVICES, in the Year ending 31 March 1867; showing all Cases in which the Navy Department has obtained the sanction of the Treasury to Expenditure not provided for in the Grants for that Year; together with Copies of the Representations made to the Treasury by the Board of Admiralty; also the BALANCE SHEET, showing the Ledger Balances on 30 September 1867; &c.

(Presented pursuant to Act 29 & 30 Vict. c. 91, s. 29.)

*Ordered, by The House of Commons, to be Printed,
17 February 1868.*

[Price 1 s.]

84.

Under 12 o.

N A V Y.

ESTIMATE of the SUM required to be VOTED on ACCOUNT for NAVY SERVICES
for the Year ending the 31st day of March 1869.

Number of Vote.	TITLE OF VOTE.	Sums required to be Voted on Account.	ESTIMATE, 1868-69.
		£.	£.
4	Coast Guard Service, Royal Naval Coast Volunteers, and Royal Naval Reserve - - -	100,000	263,926
6	Dockyards and Naval Yards at Home and Abroad	400,000	1,223,562
10, Sect. I.	Naval Stores for the Building, Repair, and Outfit of the Fleet and Coast Guard - - -	300,000	892,908
10, Sect. II.	Steam Machinery and Ships built by Contract -	350,000	1,092,500
11	New Works, Buildings, Machinery, and Repairs -	250,000	814,237
15	Half-Pay, Reserved Half-Pay, and Retired Pay to Officers of the Navy and Royal Marines - -	200,000	700,166
16, Sect. I.	Military Pensions and Allowances - - -	150,000	550,447
16, Sect. II.	Civil Pensions and Allowances - - -	100,000	223,498
17	Army Department (Conveyance of Troops) - -	150,000	350,600
		£. 2,000,000	6,111,844

Admiralty, }
17 March 1868. }

H. CORRY.
G. HENRY SEYMOUR.

N A V Y.

ESTIMATE of Sum required to be Voted
on Account for NAVY SERVICES for the Year
ending 31st March 1869.

(Presented to Parliament by Her Majesty's Command.)

Ordered, by The House of Commons, to be Printed,
17 March 1868.

NAVY (BEEF).

RETURN to an Order of the Honourable The House of Commons,
dated 19 May 1868;—for,

RETURNS “of the Number of Tierces of BEEF Cured, Average Cost per Tierce of 304 Pounds, including Package, Salt, and Labour, at HER MAJESTY’S VICTUALLING YARD, DEPTFORD, for supplying the NAVY, for the last Five Years, distinguishing each Year; and Average Price obtained during each of the last Five Years, for OLD BEEF Sold, per Tierce of 304 Pounds:”

And, “of the Number of Pounds of PRESERVED BOILED BEEF prepared at the ROYAL VICTORIA YARD, DEPTFORD, per Annum during the last Three Years, and the Average Cost Price of the same per Pound, including Tin Canister, Wooden Case, Labour, Paint, Wear and Tear of Plant, &c., and Commission or Salary for Superintending the Preparation of the same.”

Admiralty, }
19 June 1868.

JOHN HENRY BRIGGS,
Chief Clerk.

RETURNS of the Number of Tierces of BEEF Cured, Average Cost per Tierce of 304 Pounds, including Package, Salt, and Labour, at HER MAJESTY’S VICTUALLING YARD, DEPTFORD, for supplying the NAVY, for the last Five Years, distinguishing each Year; and Average Price obtained during each of the last Five Years, for OLD BEEF Sold, per Tierce of 304 Pounds:—And, of the Number of Pounds of PRESERVED BOILED BEEF prepared at the ROYAL VICTORIA YARD, DEPTFORD, per Annum, during the last Three Years, and the Average Cost Price of the same per Pound, including Tin Canister, Wooden Case, Labour, Paint, Wear and Tear of Plant, &c., and Commission or Salary for Superintending the Preparation of the same.

SALT BEEF.						PRESERVED BOILED BEEF.		
SEASON.	Quantity Cured.		Average Cost, including Package, Salt, and Labour.		Average Price obtained for Old Beef Sold.	SEASON.	Number of Pounds Preserved.	Average Cost Price per Pound, including Tin Canister, Wooden Case, Labour, Paint, and Commission or Salary for Superintendence.
	Tierces.	Barrels.	Per Tierce of 304 Lbs.	Per Barrel of 208 Lbs.	Per 304 Lbs.			
			£. s. d.	£. s. d.	£. s. d.			d.
1863-4	2,881	3,103	9 17 6 ⁷⁷	6 16 7 ⁷⁴	2 5 8 ¹⁵			
1864-5	4,336	3,996	10 4 7 ⁵⁷	7 — 7 ⁷	1 16 1 ⁸⁵	1866-7	826,128	11 ⁷⁴
1865-6	2,924	4,087	9 18 6 ⁴⁷	6 17 4 ⁹	1 18 3 ⁵⁶			
1866-7	946	1,138	10 7 11 ⁴⁵	7 5 2 ⁷⁸	2 17 5 ⁹⁴	1867-8	1,042,782	10 ³⁵
1867-8	3,113	3,013	9 5 8 ⁷⁸	6 7 11 ⁴⁸	3 5 4 ⁶¹			

Note.—The beef cured in the last three years has been packed in tierces and barrels, containing 300 lbs. and 200 lbs. respectively; but the prices given in the above Return have, for the sake of accurate comparison, been computed for 304 lbs. and 208 lbs. throughout.

Note 1.—Preserved boiled beef has been prepared by the Admiralty for two seasons only.

Note 2.—The charge for wear and tear of plant has not been included. The machinery, together with the fitting and fixing thereof, cost 2,090*l.*; but the building in which the process is carried on is an old one, and having been the property of the Crown for upwards of a century, the original cost cannot be ascertained.

Admiralty, }
16 June 1868.

Chas. Richards,
Comptroller of Victualling.

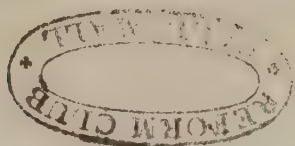
NAVY (BEEF).

RETURNS of the Number of Tierces of Beef Cured, Average Cost per Tierce of 304 Pounds, including Package, Salt, and Labour, at HER MAJESTY'S VICTUALING YARD, DEPTFORD, for supplying the NAVY, for the last Five Years, distinguishing each Year; and Average Price obtained during each of the last Five Years for Old Beef sold, per Tierce of 304 Pounds; and, of the Number of Pounds of PRESERVED BOTTED BEEF prepared at the ROYAL VICTORIA YARD, DEPTFORD, per Annum during the last Three Years, and the Average Cost Price of the same per Pound; &c.

(*Mr. Lusk.*)

*Ordered, by The House of Commons, to be Printed,
24 June 1868.*

NAVY (CHANNEL FLEET).



RETURN to Two Orders of the Honourable The House of Commons,
dated 20 and 28 February 1868;—for,

(ORDER, 20 February 1868.)

COPY “of Admiral *Warden*’s REPORT of the TRIALS of the CHANNEL FLEET
in 1867.”

(*Mr. Laird.*)

(ORDER, 28 February 1868.)

“THAT there be added to the RETURN relative to NAVY (CHANNEL FLEET)
[ordered 20th February], COPY of the REMARKS of Vice Admiral
Robinson, Controller of the Navy.”

(*Lord Henry Lennox.*)

Admiralty, }
5 March 1868. }

JOHN HENRY BRIGGS.
Chief Clerk.

Ordered, by The House of Commons, to be Printed,
6 March 1868.

C O N T E N T S.

RETURN as to Trials of Her Majesty's Ships comprising the Channel Squadron
in the Year 1867.

	PAGE.
1.—Admiral Warden's Report of 16 August 1867 - - - - -	3
2.—Ditto - ditto - 26 August 1867 - - - - -	3
3.—Ditto - ditto - 18 September 1867 - - - - -	4
4.—Ditto - ditto - 16 October 1867 - - - - -	5
5.—Ditto - ditto - 9 November 1867 - - - - -	5
6.—Ditto - ditto - 18 November 1867 - - - - -	6
7.—Ditto - ditto - 17 December 1867 - - - - -	8
8.—Ditto - ditto - 6 January 1868 - - - - -	9
9.—Remarks of the Controller of the Navy on the above Reports - - -	10
10.—Appendix.—Return of Rolling and Steam Trials of the Ships of the Channel Squadron - - - - -	14

COPY of Admiral *Warden's* REPORT of the TRIALS of the CHANNEL FLEET in 1867 ; and COPY of the REMARKS of Vice Admiral *Robinson*, Controller of the Navy.

-- No. 1. --

(No. 86.)

REPORT of Admiral *Warden*, 16th August 1867.

(Respecting Proceedings of Channel Squadron.)

"Minotaur," at Sea, Lat. 49-22 N., Long. 7-27 W.
16 August 1867.

Sir,

I REQUEST you will inform my Lords Commissioners of the Admiralty, that I take advantage of the "*Helicon*" going to Falmouth, with letters, early in the morning, to inform their Lordships, that since leaving Portland on the morning of the 12th instant, the squadron under my orders, consisting of the ships named in the margin, have been employed in carrying out their Lordships' orders of the 5th instant, and that a detailed account of the cruise will be forwarded on its termination.

"Minotaur."
"Bellerophon."
"Achilles."
"Lord Clyde."

The Secretary of the Admiralty.

I have, &c.
(signed) *Fred. Warden*,
Rear-Admiral Commanding.

-- No. 2. --

(No. 93.)

REPORT of Admiral *Warden*, 26th August 1867.

(Report of Cruise of Channel Squadron between 12th and 24th August 1867.)

Sir,

"Minotaur," at Portland,
26 August 1867.

I HAVE to request you will inform the Lords Commissioners of the Admiralty that during the cruise of the squadron under my orders, composed of the ships named in the margin, from the 12th to the 24th instant, two trials were made at fixed speed of five and seven knots ; and on the 23rd a full speed trial was commenced, intended to have been of 10 hours' duration. It was, however, brought to an untimely end, by thick weather coming on at the expiration of little more than two hours.

"Minotaur."
"Bellerophon."
"Achilles."
"Lord Clyde."

2. This trial was remarkable for little else than that none of the ships developed the power or the speed which they ought to have done ; the "*Minotaur*" and "*Achilles*," going 12.4, "*Lord Clyde*," 12, and "*Bellerophon*," 11.4.

3. The weather on the whole has been fine ; several days were devoted to evolutions alone, and with but indifferent success, which is no doubt attributable to using the new signal book, in which the nomenclature is changed, and the mode of performing evolutions altered considerably.

4. On three or four days, the weather was too thick and foggy to do anything, and on only two days was there anything like a strong breeze, which however was sufficient to prove how immensely the "*Achilles*" is improved under her new masting.

REPORTS, &c. RELATIVE TO

5. On the 20th instant, this ship and the "Achilles," in a double reefed topsail breeze, going about seven knots, on a wind, with screws disconnected, the "Achilles" was beating "Minotaur" considerably, both in forereaching and in going to windward.

I consider the "Achilles" the finest ironclad ship that has ever been built.

6. The ships' companies were also exercised making and shortening sail, shifting topsails, &c. &c.; one day at target practice, and once at night quarters.

I have, &c.

(signed) *Fred. Warden,*
Rear-Admiral Commanding.

The Secretary of the Admiralty.

— No. 3. —

(No. 132.)

REPORT of Admiral *Warden*, 18th September 1867.

(Reporting Proceedings of Channel Squadron.)

Sir,

Minotaur, at Queenstown, 18 September 1867.

I HAVE to request you will inform my Lords Commissioners of the Admiralty that I arrived here this morning from Bantry with the ships named in the margin, the "Helicon" having preceded me, that the "Orwell" arrived in the course of the day, and that I found the "Pigeon" here awaiting my arrival.

"Minotaur."
"Bellerophon."
"Achilles."
"Pallas."
"Lord Clyde."

2. Leaving Plymouth on the 3rd instant, the Squadron arrived at Berehaven on the morning of the 5th, having experienced for the previous 24 hours a strong breeze from the N.W., with a considerable sea and heavy swell, during which time there was a trial of sailing for three hours, with screws disconnected, which elicited no new feature except that the "Achilles," for the first time, distanced the "Pallas" very considerably, having forereached and weathered on her 1,800 yards during the trial.

3. On the morning of the 5th instant, this ship, whilst steaming about seven and a-half knots, with this sea and swell on her bow, pitched once so heavily as to wash away her jib-boom and three of the iron plates forming her head berthing.

4. It was reported that she lurched under this to 19°. "Minotaur" is, however, so far as I can judge at present, one of the easiest ships in a seaway I was ever on board of. She pitches like the "Achilles," deep but easily, and rolls perhaps generally to the extent of about 2° more than that ship. I am disposed to believe that, if "Minotaur" were as well masted as the "Achilles," she would be just as good a ship.

5. The weather was so unsettled, that I was unable to leave Berehaven to any good purpose until the forenoon of Friday the 13th, and in the afternoon the squadron was exercised at target practice.

6. On this occasion, an accident occurred to one of the guns of the "Pallas."

7. The remaining days have been devoted to evolutions under steam and exercise aloft.

8. On the evening of the 16th instant, we picked up the remains of a raft at sea off Cape Clear.

9. The defects in the "Lord Clyde's" cylinders and pistons, and the splitting of slide valve cover of "Minotaur," having been made the subject of separate reports, need not be further adverted to, except to note that as this ship cannot work steam expansively until the defect is remedied, she must necessarily expend more fuel than she would otherwise do.

10. Nothing further occurred noteworthy except the loss of a main topsail yard on board the "Bellerophon" on the evening of the 14th instant.

I have, &c.

(signed) *Fred. Warden,*
Rear-Admiral Commanding.

The Secretary of the Admiralty.

— No. 4. —

(No. 170.)

REPORT of Admiral *Warden*, 16th October 1867.

Sir,

"Minotaur," at Lisbon, 16 October 1867.

I HAVE the honour to report my arrival at this place in company with the squadron under my orders on the 15th instant.

The weather was fine during the whole passage from Queenstown, and was made partly under sail alone, and partly under steam. I do not know that it offered any feature of particular interest as respects the squadron, except that the "Warrior," as before, was found to broach to repeatedly, and as much as eight points at a time against her helm, when running with a strong breeze, and her screw down.

2. Under the same circumstances, viz., a strong breeze on the quarter, when running eight knots for several hours together, and with screws disconnected, the lee line composed of "Bellerophon," "Lord Warden," and "Lord Clyde," were obliged to use steam, as well as sail, to keep their station.

3. The "Warrior" appeared to roll at times very considerably, much more than the state of the sea would seem to warrant.

4. The "Lord Warden's" main deck was very seriously flooded during the passage, apparently from the imperfect fitting of the ports.

5. There are also among the ships some trifling engineer's defects, which will all be made good by the 21st instant.

The "Lord Warden" has a crack in her cylinder jacket. One of the condensers of the "Minotaur" will require patching, and the pistons of "Lord Clyde" are giving further trouble; and as this defect will require serious attention at no distant date, I enclose a list of her defects which, it will be observed, are very considerable, as we only steamed during the passage 380 miles for a total period of 72 hours, including three trials at fixed rates of speed.

6. The coal expended by "Lord Clyde" was 112 tons, which amount of work produced a defect which will take five days to make good.

The total expenditure of coal amongst the squadron was 855 tons.

I have, &c.

(signed) *Frederick Warden*,

The Secretary of the Admiralty.

Rear-Admiral, Commanding.

"Minotaur."
"Bellerophon."
"Achilles."
"Lord Warden."
"Warrior."
"Lord Clyde."
"Helicon."

— No. 5. —

(No. 192.)

REPORT of Admiral *Warden*, 9th November 1867.

(Reporting return of Squadron to Lisbon, with account of Proceedings during the Cruise.)

Sir,

"Minotaur" at Lisbon, 9 November 1867.

I REQUEST you will be pleased to acquaint the Lords Commissioners of the Admiralty, that I returned to this anchorage yesterday, the 8th instant, with the ships named in the margin, having in obedience to their Lordships' orders, been absent a fortnight cruising within a distance of 50 miles from Cape Roca. We have been favoured with singularly fine weather, and the time has been occupied in various ways in connection with my instructions.

2. The whole of three days, and part of a fourth, have been devoted to evolutions under steam (irrespective of those which a squadron is necessarily called upon to perform) embracing that part of the signal book connected with manœuvring in divisions, sub-divisions, and bow and quarter line.

3. Two days were entirely occupied with steaming in circles, at different rates of speed, viz., 5, 8, and 12 knots, or full speed at different angles of helm, 25° and hard over; and making the circle each way round.

"Minotaur."
"Bellerophon."
"Achilles."
"Lord Warden."
"Warrior."
"Lord Clyde."
"Pallas."
and
"Helicon."

The whole of the ships, except the "Pallas," completed the series, and the tabulated returns will be sent at an early opportunity.

4. The usual exercises aloft were duly carried out. There was one day of target practice, exercise at night quarters, as well as that of "prepare ship for action;" all things considered the whole was as satisfactory as could be reasonably expected.

5. On Thursday the 7th instant, I detached "Prince Consort," and "Royal Oak," to Gibraltar, to complete coal and to rejoin me without any unnecessary delay. I expect them here on or about the 18th instant.

6. I regret to be obliged to add that a fire occurred on board the "Prince Consort" on the 4th instant, the lagging of the starboard after boiler having taken fire, but without any serious consequences. An inquiry was ordered into all the circumstances of the case, and the detailed report will be sent by the first opportunity.

7. I have commenced, and intend to continue, the exercise of evolutions with the steam launches of the squadron, for the instruction of all classes of officers.

8. I found at anchor here, the United States squadron under the command of Admiral Farragut, consisting of the ships named in the margin, and it appears probable those ships will remain here about a week from this date.

"Franklin" (Flag ship).
"Canandaigua," (Screw steam sloop).
"Swatara," (Screw gun vessel).

"Shamrock," (Paddle).
"Frolic," (Paddle).
"Guard," (Sailing store ship).

I have, &c.
(signed) *Fred. Warden,*
Rear-Admiral Commanding.

The Secretary of the Admiralty.

P.S.—With reference to the orders on the subject of gun carriages and slides, the "Minotaur" has exercised for three days, the "Bellerophon" on two, and the "Lord Warden" on one.

— No. 6. —

(No. 207.)

REPORT of Admiral *Warden*, 18th November 1867.

(Forwarding an Abstract of Trials of Steaming in Circles.)

"Minotaur," at Lisbon,
18 November 1867.

Sir,

IN forwarding the enclosed return of a series of steaming in circles by the ships composing the squadron under my orders, which occupied two entire days, as recorded in my letter of the 9th instant, No. 192, I have only to observe, that they are complete, except as regards the "Pallas" and "Achilles," the latter in consequence of having to right her helm on two occasions, and the former from a want of time to do more than make the trials at full speed.

2. The most noteworthy circumstance connected with it is the fact, that this ship was unable to reach a 12-knot speed, never having exceeded 11 knots and 52 revolutions.

3. This rate of speed also repeated itself on Friday the 8th instant on returning to this place, when the maximum speed obtained was 11 knots and 52 revolutions.

4. I can only attribute this very great deterioration in her speed to the combined causes of—1, indifferent coal; 2, bad stoking; 3, and a foul bottom; three causes which have produced similar effects in the "Warrior," as will be seen by the accompanying enclosures from Captain Boys of that ship.

I have &c.
(signed) *Fred. Warden,*
Rear-Admiral Commanding.

The Secretary of the Admiralty.

H. M. S. "Minotaur," Lisbon; Rear Admiral F. Warden, C.B., Commanding.

ABSTRACT of CIRCLE STEAMING performed by CHANNEL SQUADRON, off the Coast of Portugal, on the 6th and 7th November 1867.

NAME OF SHIP.	At 12 Knots.						10 Knots.						8 Knots.						5 Knots.											
	Hard Starboard.		Hard Port.		25° Starboard.		Hard Starboard.		Hard Port.		25° Starboard.		Hard Starboard.		Hard Port.		25° Starboard.		Hard Starboard.		Hard Port.		25° Starboard.							
	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.	Time completing Circle.	Diameter of Circle.						
	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.	Circle.						
Minotaur -	-	-	-	-	-	-	7.45	650	6.37	598	8.53	806	8.13	769	8.56	575	8.44	609	10.34	785	9.58	837	13.0	570	12.11	596	15.19	711	14.37	714
Achilles -	-	6.40	616	6.40	620	7.25	780	7.48	768	-	-	-	-	-	5.53	618	Not complete	Not complete	9.47	738	Not complete	Not complete	13.18	618	12.35	615	14.41	745	14.20	730
Warrior -	-	7.21	753	8.11	768	7.52	828	9.11	822	-	-	-	-	-	8.52	633	10.10	653	9.98	762	11.0	754	10.51	687	12.18	532	12.53	776	14.19	800
Bellerophon -	-	4.40	365	4.55	437	5.1	397	6.10	510	-	-	-	-	-	6.15	350	6.15	395	6.7	425	6.40	510	9.5	270	8.32	420	9.55	395	8.30	550
Lord Warden -	-	-	-	-	-	-	3.49	419	-	-	5.7	509	5.1	556	5.50	414	5.48	476	6.40	520	6.16	523	8.55	386	8.15	393	10.2	498	9.3	491
Lord Clyde -	-	4.56	377	4.52	379	5.25	400	5.38	408	-	-	-	-	-	6.48	397	6.58	428	8.4	429	7.58	435	9.54	392	9.52	388	9.98	452	10.12	475
Prince Consort -	-	-	-	-	-	-	4.33	424	4.50	469	5.8	570	5.13	404	5.8	427	5.19	411	5.52	475	6.7	425	7.40	370	7.56	342	9.1	297	8.49	331
Royal Oak -	-	-	-	-	-	-	5.54	365	5.28	407	6.30	481	5.32	529	5.54	365	5.28	407	6.30	481	5.32	529	8.18	425	7.22	376	9.15	577*	8.54	533*
Pallas -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.57	442	-	-	4.57	442	-	-	-	-	-	-	-	-	-	-

* Wheelropes carried away.

Frederick Warden, Rear Admiral Commanding.

(No. 246.)

REPORT of Admiral *Warden*, 17th December 1867.

(With Abstract of Full Speed Trial.)

Sir,

“Minotaur,” at Sea, 17 December 1867.

I HAVE the honour to forward herewith, for the information of their Lordships, an abstract of a full speed trial of Her Majesty's ships under my command, made on the 26th November 1867. Diagrams of the trial are enclosed.

Diagrams and
Indicator Dia-
grams.

I have, &c.

(signed) *Fred. Warden*,
Rear-Admiral Commanding.

The Secretary of the Admiralty,
Whitehall.

Enclosure in No. 7.

ABSTRACT of a FULL SPEED TRIAL of HER MAJESTY'S SHIPS of the CHANNEL SQUADRON, under the
Command of Rear Admiral *Frederick Warden*, C.B.

SECOND SERIES OF EXPERIMENTS UNDER STEAM ALONE.

Approximate Speed at which each Experiment was made, and Ships' Names.	Date of Trial.	Where Tried.	Course of Vessel.	Wind.		State of the Sea.	Draught of Water.		Boilers.		Height of Weather Barometer.	Vacuum in Condensers.		Height of Steam Gauge.	Mean Pressure of all the Indicator Dia- grams taken during each Experiment.	Mean Revolutions of the Engines per Minute by Counter.	Mean Indicated Horse Power.	Speed of Vessel per Hour by Common Log.
1.	2.	3.	4.	Direction.	Force.	7.	Forward.	Aft.	Total Number.	Number used.	12.	Forward.	Aft.	15.	16.	17.	18.	19.
Full Speed.							<i>Ft. in.</i>	<i>Ft. in.</i>			<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Ins.</i>	<i>Lbs.</i>			<i>Knots.</i>
Minotaur - -	26th November 1867.	At sea	N.E.	E. to N.	4 to 0	Smooth	25 8	26 0	10	10	30.22	26.15	26.15	20.20	23.24	53.60	5629.25	11.40
Prince Consort - -	"	"	"	"	"	"	23 9	25 10	8	8	30.23	26.21	26.00	18.35	21.76	53.09	3721.75	11.00
Bellerophon - -	"	"	"	"	"	"	21 0	26 1	8	8	30.24	23.25	24.43	22.78	18.40	60.41	5092.37	11.75
Achilles - -	"	"	"	"	"	"	25 7½	26 8½	10	10	30.29	26.0	26.0	23.25	26.24	52.40	5688.99	13.25
Lord Warden - -	"	"	"	"	"	"	23 8	27 8	8	8	30.26	27.31	27.31	27.62	14.75	57.06	4472.26	11.31
Warrior - -	"	"	"	"	"	"	25 3	27 0	10	10	30.20	25.12	26.12	18.80	23.55	48.75	4752.00	12.00
Lord Clyde - -	"	"	"	"	"	"	23 8	27 0	8	8	30.30	26.20	26.00	23.40	13.22	56.27	3822.70	10.80
Pallas - -	"	"	"	"	"	"	16 0	24 4	4	4	30.34	26.53	26.8	26.50	{ 24.26 7.38 }	74.98	3161.60	11.55
Helicon - -	"	"	"	"	"	"	9 0	10 7	4	4	30.34	25.20	25.20	22.75	25.28	33.75	1358.43	14.10
COAL.																		
Whole Distance Run in 8 Hours by Patent Log.	Quantity Consumed in 8 Hours.	Average Consumption per I. H. P. per Hour.	Consumption per Square Foot of Fire-grate per Hour.	Name and Quality.	Quantity which can be carried in the Boxes.	Total Quantity which can be carried on Board.	Weight of Ashes thrown over- board in 8 Hours.	Distance run by each Ship during Trial, observations taken in Flag Ship.	Total Number of Revolutions by counter during Trial.	Co-efficient.	Whether Priming took place during Trial.	State of Ship's Bottom.	REMARKS.					
20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	32.	33.					
<i>Knots.</i>	<i>Tons.</i>	<i>Lbs.</i>	<i>Lbs.</i>		<i>Knots.</i>	<i>Knots.</i>	<i>Cuts.</i>											
Minotaur - -	90	82.05	4.077	25.50	Welsh mixed.	789.	789.	195.	90.	25.748	1.000	No	Very foul.					
Prince Consort - -	Log defective.	60.72	4.57	24.14	"	813.04	849.27	40.71	91.5	25.488	.938	No	Little foul.					
Bellerophon - -	92	71.10	4.07	28.10	"	787.36	787.36	103.6	90.1	31.875	1.236	No	Very foul					
Achilles - -	Log defective.	68.09	3.87	22.40	"	1096.	1096.	448.	100.	25.155	.878	No	Tolerably clean.					
Lord Warden - -	93.5	62.95	3.45	21.86	"	1022.21	1022.21	150.	95.	27.126	.907	No	Clean -					
Warrior - -	95	60.91	3.58	19.80	"	1261.	1261.	194.0	93.	23.400	.841	No	Very foul					
Lord Clyde - -	Log fouled.	61.00	4.48	24.60	"	851.8	922.7	102.	87.	27.015	1.085	No	Clean -					
Pallas - -	"	37.53	3.32	25.00	"	615.	714.	38.8	90.2	35.096	1.395	No	Tolerably clean.					
Helicon - -	103	20.25	4.17	28.63	"	874.86	874.86	24.	102.	16.200	-	No	Foul -					

(signed) *Walter Wilson Williamson*,
Chief Inspector of Machinery.

Approved.

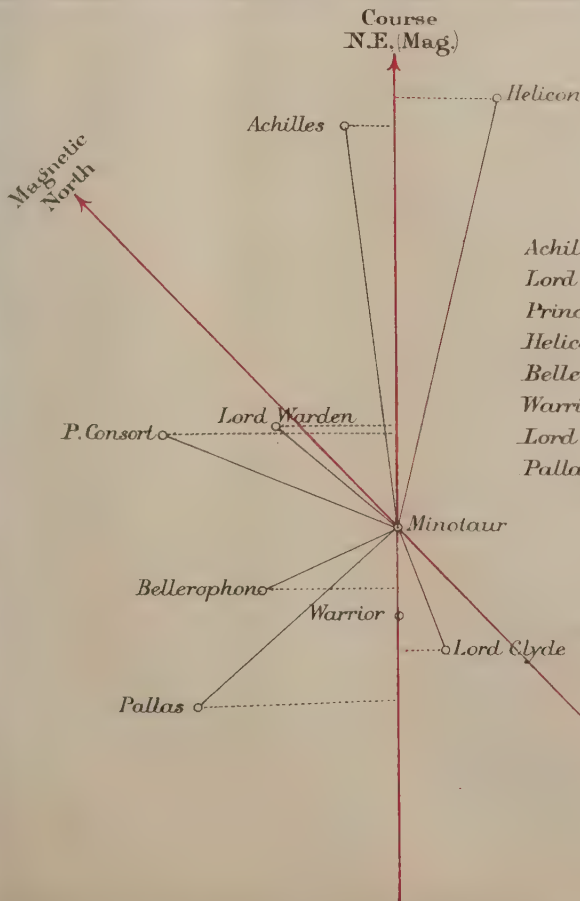
(signed) *Fred. Warden*,
Rear-Admiral Commanding.

DIAGRAMS OF FULL SPEED TRIAL. 26TH NOV^R 1867.



BEGINNING OF TRIAL
8^H A.M.
WIND E. S.E. FORCE 4.
SEA SMOOTH.

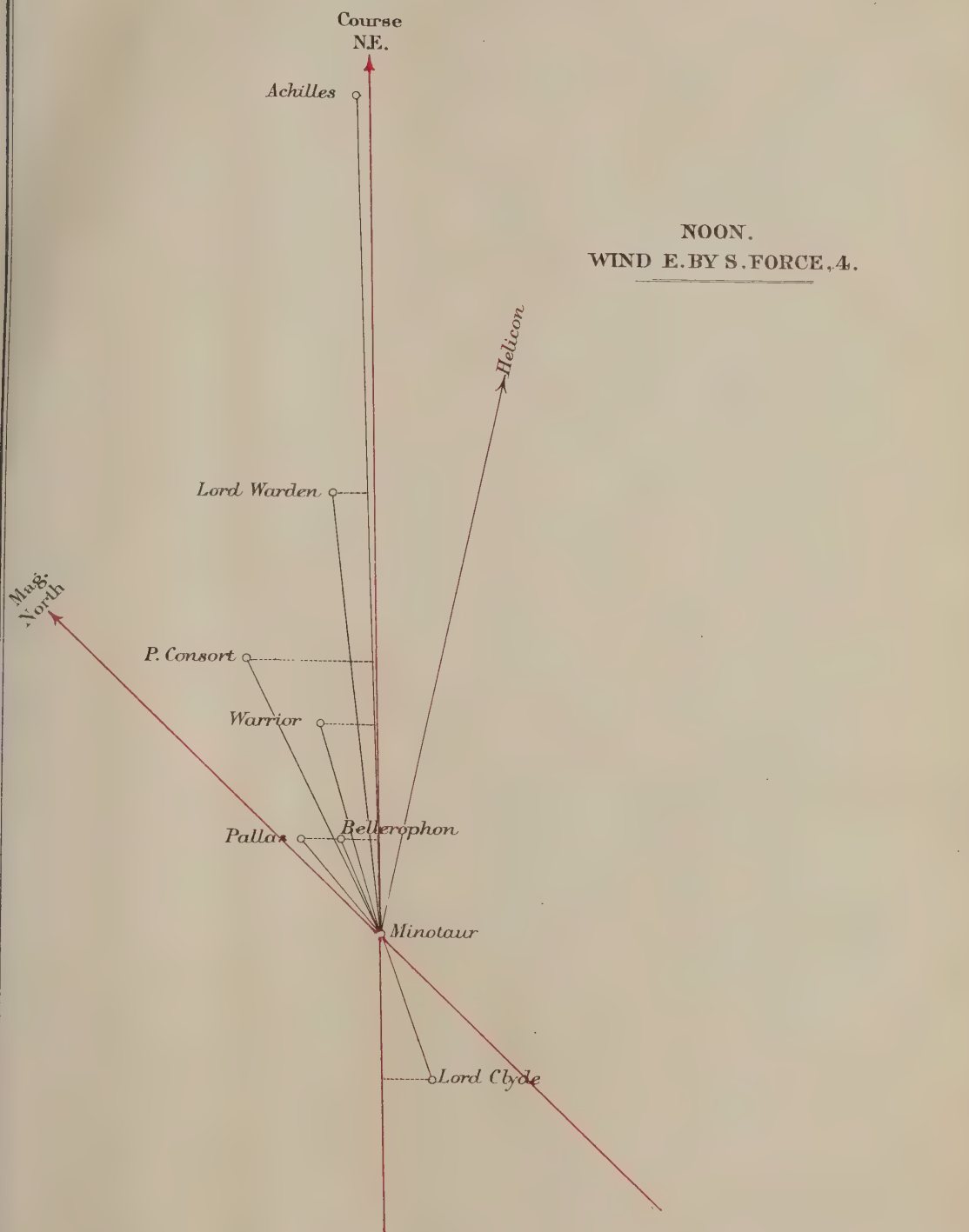
		yards	yards
Achilles	South	971	or astern 686
Warrior	South	1405	993
Lord Clyde	South	749	529
Prince Consort	N. 63° W.	1830	349
Lord Warden	N. 84 W.	1788	1125
Bellerophon	West	2014	1424
Pallas	S. 64 W.	3040	2874
Helicon	S. 51 E.	822	or ahead 109



10^H AM.
WIND EAST FORCE 3.
SEA QUITE SMOOTH

		yards	yards
Achilles	N. 38° E.	4613	or ahead 4579
Lord Warden	N. 6 W.	1753	1103
Prince Consort	N. 26 W.	2904	1041
Helicon	N. 58 E.	4993	4865
Bellerophon	N. 69 W.	1685	or astern 658
Warrior	S. 45 W.	1062	1062
Lord Clyde	S. 25 W.	1507	1416
Pallas	N. 87 W.	3100	2074

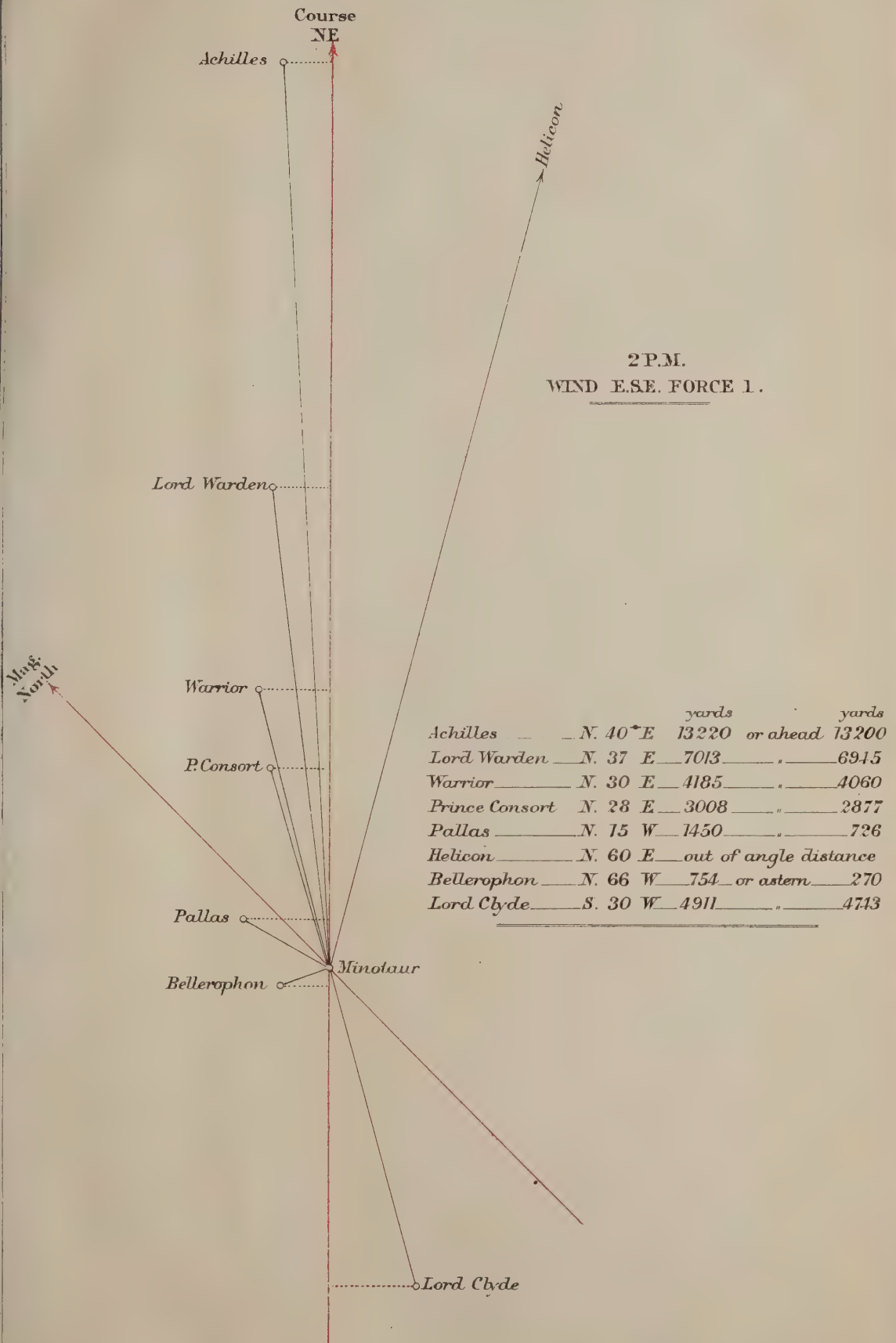
DIAGRAMS OF FULL SPEED TRIAL. 26th NOV^r 1867.



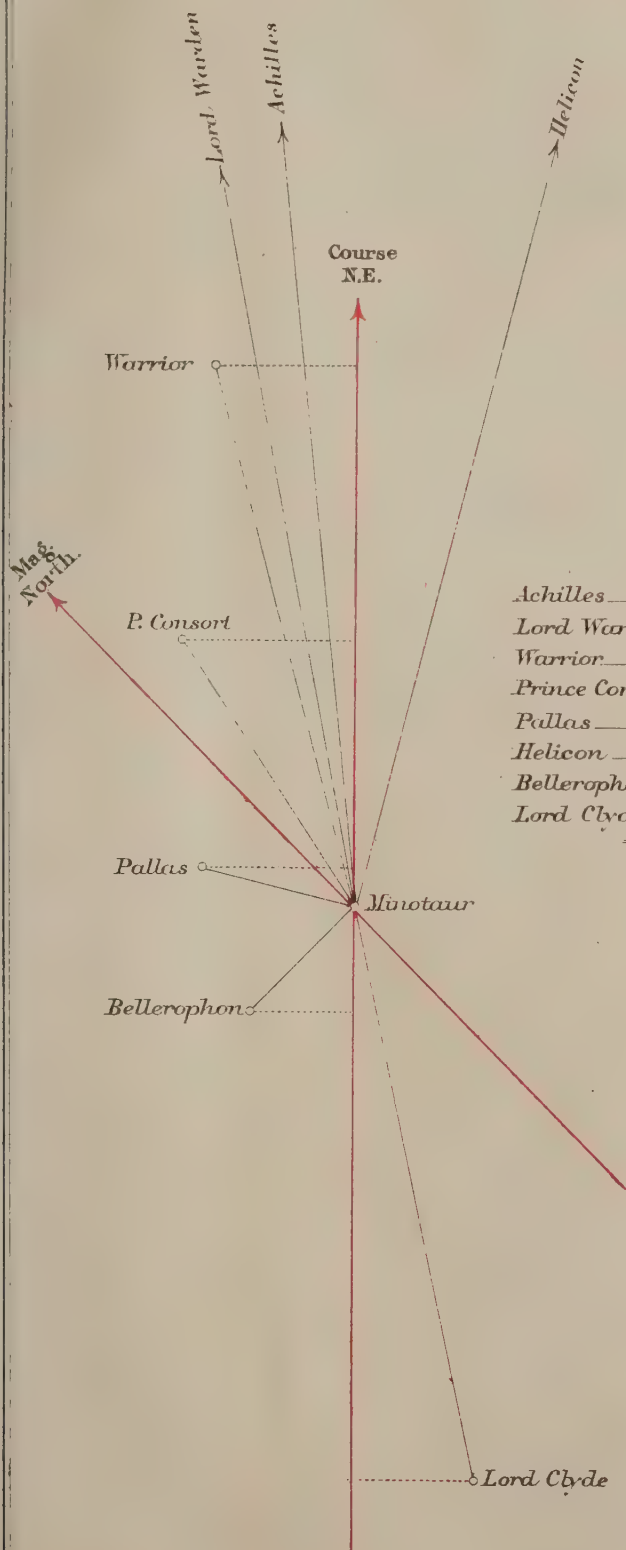
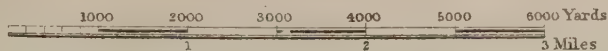
NOON.
WIND E. BY S. FORCE, 4.

		yards.		yards.
Achilles	N. 44° E.	11040	or ahead	11020
Lord Warden	N. 40 E	5844		5755
Prince Consort	N. 20 E	4010		3634
Warrior	N. 30 E	2916		2829
Helicon	N. 58 E	out of angle distance		
Bellerophon	N. 23 E	1437	or ahead	1332
Pallas	N. 5 E	1718		1316
Lord Clyde	S. 26 W	1975	or astern	1868

DIAGRAMS OF FULL SPEED TRIAL. 26TH NOV^R 1867.



DIAGRAMS OF FULL SPEED TRIAL. 26TH NOV^R 1867.

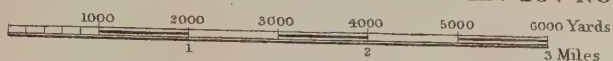


END OF TRIAL.
4 P.M.
WIND NORTH.FORCE 1.

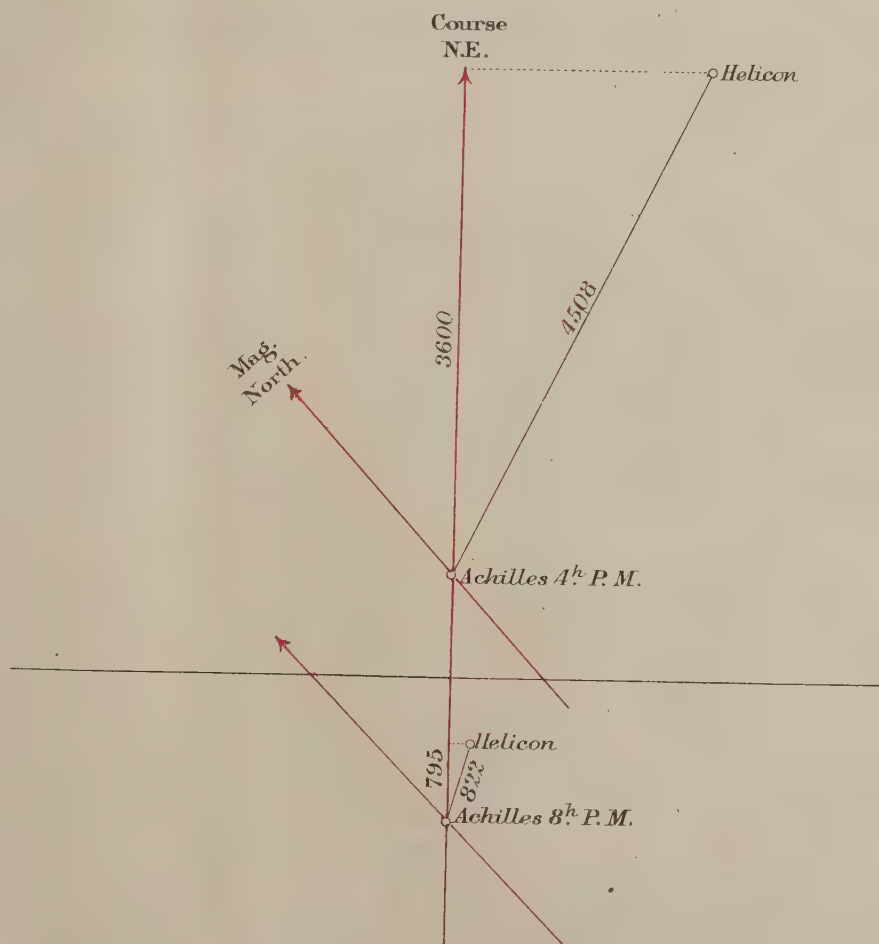
			yards
Achilles	N. 40 ⁺ E	estimated distance ahead	20000
Lord Warden	N. 35 E	yards	10000
Warrior	N. 31 E	6417 or ahead	6226
Prince Consort	N. 10 E	3661	3000
Pallas	N. 30 W	1630	421
Helicon	N. 60 E	estimated distance	23500
Bellerophon	N. 89 W	1670 or astern	1160
Lord Clyde	S. 33 W	6875	6725

Signed
G. Marsh
Staff Commander.

DIAGRAMS OF FULL SPEED TRIAL. 26TH NOV^R 1867.



RELATIVE POSITIONS
OF
ACHILLES AND HELICON.



— No. 8. —

(No. 3.)

REPORT of Admiral *Warden*, 6th January 1868.

(Information respecting late Trials of Channel Squadron.)

Sir,

“Minotaur,” at Portsmouth,
6 January 1868.

IN obedience to the instructions contained in their Lordships' letter of the 2nd instant (S.), directing me to call upon the captains of the several ships lately composing the Channel Squadron, to furnish further information on some points connected with the trials carried out under my orders,

I request you will inform their Lordships that I have written to each of them to send me the necessary information as soon as possible, but as two of the ships are now on foreign service, and two others have been lately paid off, and as early replies are requested to be sent to the several questions contained in your letter, I will endeavour meanwhile to supply the required information, so far as lies in my power.

2. With reference to the first two questions relating to the trials at fixed speed, I may state that the standard adopted for the fixed rate of speed was by signals, thus:—

“Prepare for trial at fixed rate of speed, and admiral intends to go at so many revolutions.”

3. The ships were sometimes formed in line abreast, and on other occasions were kept in their usual order of sailing, leaving it to the judgment of the captains to maintain the proper speed, and the necessary number of revolutions.

4. I think in some of the earlier instances the revolutions were not given from the flag-ship; it is always done now.

5. With reference to the question about coals, all the ships were not supplied with the same quality of coal, which appears to have arisen in this way:—

The contractor (or rather he who was the contractor, for I believe the contract was at an end) was not prepared to supply the necessary quantity from his own resources, and he then, as I understood, purchased coals in the market, as he required them for the use of the squadron. He also sent to England for some, and hence it arose that some ships were supplied with coals of a better steaming quality than others, but the last he supplied in the month of November were of so inferior a quality that the “Lord Clyde” refused to receive the last 100 tons sent alongside. The two ships which complained of the quality of the coal were supplied from Queenstown, as reported in my letters, No. 207 of the 18th November, and No. 249 of the 18th December last.

6. As regards the questions about the sailing trial, and full speed steaming trial: In the sailing trial none of the ships tacked: it was a stretch of four hours on one tack, and it was this circumstance which especially excited my astonishment at the performance of the “Achilles” and “Warrior,” to see the two ships just walking away steadily to windward in the winds' eye of the squadron, especially the former ship, which, at the close of the trial, was about five miles dead to windward of the “Minotaur,” from astern of which ship she started.

The “Lord Clyde” tacked at the close of the trial, but, as I explained before, she was thrown to leeward accidentally at the commencement, and was not taken into the account in consequence.

7. I cannot answer the questions about the screws or the speed of the other ships. The signal was made, “Optional disconnect Screws,” believing that all the captains would do that which they considered most advantageous under the circumstances. I believe, but am not sure, that the “Royal Oak” never disconnected her screw.

8. I do not know the speed of the other ships, but it will be readily inferred, from the speed of the “Minotaur,” taken from the diagrams which accompanied my report. She was going from 4·5 to 6·2 knots, and the screw revolving at

the latter speed 14 times, or thereabout. "Minotaur's" screw does not revolve at all under a speed of $4\frac{1}{2}$ knots.

9. As regards the notation, "Bottom very foul, &c.," it was not always inserted at first, but it was subsequently ordered by their Lordships' letter of the 23rd November last, (S) to be always noted.

10. I can state generally that the captains of the squadron were anxious to keep the ships' bottoms clean by hogging, but it is an operation not very easily performed in very strong tideways, as in the Tagus and at Spithead, and it also requires a great many days to do it under the most favourable circumstances, and at the best is only a partial remedy, although the only one to keep down the collection of submarine particles which collect on iron ships' bottoms. Bilge-pieces also, as in the "Minotaur," interfere with its successful operation.

I apprehend that, after a certain number of months out of dock, all iron ships' bottoms are more or less foul, especially where no anti-fouling composition has been used; and, therefore, where it has not been mentioned that a ship's bottom is foul it is not to be considered that the bottom was clean.

11. The same sort of answer, in a different way, applies to coals. Wherever it is not mentioned that the coals were of good quality the contrary is not to be inferred, but only that when supplied they were considered to be of such quality as to be fit for use in Her Majesty's service. Bad coals are usually made the subject of special complaint or report.

The Secretary of the
Admiralty.

I have, &c.
(signed) *F. Warden*,
Rear Admiral Commanding.

— No. 9. —

REMARKS of the CONTROLLER of the NAVY on above REPORTS.

REMARKS on Performances of the Ships comprising the Channel Squadron in the Autumn of 1867.

Admiralty, S. W., 27 February 1868.

I BEG leave to submit the following observations upon the Reports of Rear Admiral Warden, commanding the Channel squadron, with reference to the trials of the ships composing that squadron in the autumn of last year, observing that I will consider those Reports in the order in which they were written.

The first Report, dated 26th August 1867, relates chiefly to steam trials, at 5 knots, 7 knots, and full speed respectively, the ships on trial being "Minotaur," "Achilles," "Bellerophon," and "Lord Clyde."

In the detailed Reports of these trials, I observe very great discrepancies, which further trials, carefully conducted and reported, alone can clear away.

At 5 knots the "Bellerophon" is said to have burned 1,400 lbs. of coal per hour, and indicated 653 horse power; while the "Lord Clyde" is said to have maintained the same speed with but 409 horse power.

At 7 knots the "Lord Clyde" is said to have indicated 921 horse power, while the "Bellerophon" required 1,244; and while the "Lord Clyde" burnt only 2,688 lbs. of coal per hour, the "Bellerophon" is said to have burnt 4,354 lbs.

At the 5 knot trial the consumption, per indicated horse power, was:—"Lord Clyde," 3.86 lbs.; "Bellerophon," 2.20 lbs.; while at the 7 knot trial the consumption was, "Lord Clyde," 2.9 lbs.; "Bellerophon," 3.51 lbs. At the full power trial the "Bellerophon" is said to have required a great deal more power and coal to drive her 11.8 knots than the "Lord Clyde" required to drive her 12.3 knots. The previous trials of these two ships, made under the same circumstances, with the same staff of stokers, and both ships having clean bottoms, have shown that the performances of the "Bellerophon" are superior to those of "Lord Clyde," which is quite consistent with the fact that the "Bellerophon" is the longer, narrower, and finer lined ship of the two.

It

It is only, therefore, to the foulness of the "Bellerophon's" bottom, on the one hand, and to probable differences in the mode of stoking and of estimating the coal consumption and power in the two ships on the other hand, that such large discrepancies as the above can be attributed.

Somewhat similar discrepancies also exist between the results recorded for the full power trial, especially when the very inferior performance of the "Minotaur" is also taken into account.

In discussing this full speed trial it is necessary to observe that I base my remarks upon the results deduced from the detailed Reports, forwarded subsequently (19th September), which differ somewhat from Admiral Warden's general statement, and are as follows :—

	Horse Power.	Speed.
"Achilles" - - - - -	5,591	12·5
"Lord Clyde" - - - - -	3,771	12·3
"Bellerophon" - - - - -	4,580	11·8
"Minotaur" - - - - -	5,937	11·75

The "Minotaur" is a ship 400 feet long, and with very fine lines; the "Lord Clyde" is a ship only 280 feet long, with nearly the same beam and midship section, and has very full lines, and yet it would appear from the Report in detail that the "Lord Clyde" steamed, with only 3,771 horse power, three-tenths of a knot faster than the "Minotaur" steamed with 5,937 horse power. Foulness of bottom may again be assigned as the cause of part of this difference, but the performance of the short and bluff ship is so far superior to that of the long and fine ship as to cast grave doubt upon the records. It is exceedingly difficult to believe that the "Lord Clyde" steamed at sea 12·3 knots with only 3,771 horse power, as her measured mile speed at half-power was 11·736 with 3,153 horse power.

In many respects this trial is most remarkable, and is strongly in favour of the two ships of recent design, as compared with the long ships of an earlier date, for although the engines of the "Bellerophon" and the "Lord Clyde," both of the new type, fell extremely short of their power, while the old type engines in the long ships more than developed theirs, yet the shortest ship ("Lord Clyde") beat the longest ("Minotaur") by half a knot, and fell only two-tenths of a knot short of the "Achilles." It is only necessary to remind their Lordships that the engines of all four of these ships ought to develop equal power, in order to show how extremely well the shorter vessels performed under very adverse circumstances, even the "Bellerophon" slightly exceeding the "Minotaur" in speed, although nearly 25 per cent. deficient of her proper steam power. The result is very satisfactory, as it was only with equal steam power that short ships of recent design could have been expected to compete with the long ships.

This Report gives a very satisfactory account of the improvement made in the sailing qualities of the "Achilles" by the change in the position of her foremast, and shows that on this occasion, the three masts of the "Achilles" gave better results than the five masts of the "Minotaur." Their Lordships are aware that all these long ships were originally designed with three masts, and that the change to five was only made upon the advice of a committee of naval officers of experience.

Admiral Warden expresses in this, his first Report, the opinion that the "Achilles" is the finest iron-clad ship that has ever been built. I am pleased to find that a ship, for the qualities of which I am so largely responsible, has met with approval; but I cannot concur in the opinion.

The "Bellerophon," "Lord Clyde," and "Lord Warden" are much stronger, handier, and more efficient fighting ships in many respects. The "Achilles" is very long, and plated with what is now properly considered weak armour.

Admiral Yelverton, after a long and dispassionate consideration of the subject, inserted in his Report a passage which must not be forgotten. He said—

"We must not, however, lose sight of the fact, that with all her good qualities,

the 'Achilles' is, from her great length, most difficult to handle. . . . I feel certain that this ship might, and probably would, have to go out of action to turn round."

The change in the rig does not touch this consideration, which relates to manœuvring under steam. Admiral Yelverton also stated that he "had no hesitation in saying that ships of the 'Bellerophon' class, from their size and general handiness, particularly under steam, will prove more efficient and serviceable for war purposes."

The Report of Admiral Warden, in which a different opinion is expressed, leaves many points of great importance entirely out of consideration.

The next Report from Admiral Warden is dated 18th September 1867, the "Pallas" having joined the squadron in the interval. The only points in it requiring remark are the extreme pitch of the "Minotaur" on crossing to Ireland, and the running out of the "Pallas's" gun during a lurch, with the consequent falling out of the rear-rollers.

I only mention the latter for the sake of pointing out that the accident arose merely from the omission under the axle, of a pin, which is now a usual fitting. With regard to the exceptional pitch of the "Minotaur" I need only observe, that the excess of weight over buoyancy which must exist in the bows of such long and fine ships, when plated with armour, and which must conduce occasionally to heavy plunging, is no doubt a defect, and one which has, among others, strongly influenced the Admiralty constructors to restrict our heavily armoured ships to more moderate proportions. The incident also serves to show that the fore-castle, which has been added to this class of ships since they were originally designed, is very valuable.

The next Report from Admiral Warden is dated Lisbon, 16th October 1867; on the receipt of this Report I explained to their Lordships the desirability of trying the "Warrior" running free, with her screw up, and they were pleased to give the necessary instructions, as also to call for a report on the causes of the flooding of the "Lord Warden's" main deck on one occasion. I also explained that the reported defect in the "Lord Clyde's" engines was one which had previously been dealt with. This defect was observed long before, and the attention of the contractors was called to it, and they had, at the date of Admiral Warden's Report, nearly completed new and harder piston-rings to be put in when time could be spared for the purpose. This information probably had not then reached Admiral Warden.

I can see nothing surprising, and certainly nothing very unsatisfactory, in the fact that the lee line of short ships on one occasion were obliged to use steam to keep up with the long ships, when running at eight knots, with a strong breeze on the quarter.

All the short ships have screws with much less pitch than the long ships, and therefore screws which are greater impediments to speed under canvas.

The trial in question, however useful in its way, of course throws but little light on the respective sailing qualities of the several ships, as it included neither tacking, nor wearing, nor any other operation than that of merely running free, keeping station.

The Reports of trials at six and seven knots, forwarded by Admiral Warden, 24th October 1867, proved to be incomplete, and became the subject of inquiries which have occupied some time, and have prevented me from hitherto considering the trials as fully as they require.

The Report, dated Lisbon, 9th November 1867, needs no comment.

The Report, dated Lisbon, 18th November 1867, and its inclosures, comprise circle-steaming returns. They are chiefly remarkable for the very inferior steaming performances of the "Minotaur" and "Warrior," probably due, as explained by Admiral Warden, to inferior coal, bad stoking, and foul bottoms.

The last Report which requires mention, is that dated Lisbon, 3rd December 1867.

This Report first describes the result of a sailing trial of the squadron (consisting of "Achilles," "Minotaur," "Warrior," "Bellerophon," "Lord Warden," "Lord Clyde," "Prince Consort," "Royal Oak," and "Pallas") chasing to windward, but, it is necessary to observe, on a single tack only, and, therefore, without going about. In this trial the "Lord Clyde" was put to considerable disadvantage by an accident.

The "Pallas" is stated to have been "nowhere, from inability to do more,"
although

although last year Admiral Yelverton, after a long series of trials, reported of her as follows :—

"The 'Pallas,' on the whole, has proved herself to be the best sailer of the squadron, and decidedly the most weatherly ship. She has missed stays at times when she ought to have gone round, but there is no doubt about her being a thorough good sailing ship."

The "Minotaur," which, on the former trial, with the wind on the quarter, beat the "Bellerophon" and "Lord Warden," was now beaten slightly by both of them.

I think the true inference to draw from such results is that a single trial is a very unsafe basis to found conclusions upon, for the "Pallas," which has proved her excellence as a sailing iron-clad over and over again, and of whose "manifest superiority" in this respect Admiral Warden himself spoke last year, is in this case placed in a position of inferiority to the whole squadron. Such anomalous results must obviously be received with caution, and compared carefully with others that have been previously obtained and recorded.

Similar observations apply to the steaming trial which is next recorded, and in which several anomalous results were obtained. Admiral Warden appears to consider this trial peculiarly unfavourable to the short ships of recent construction ; but this is obviously not the case.

The low performance of the "Bellerophon" was matched with the low performance of the "Minotaur," while it was the "Lord Warden," a short ship of the latest construction, that beat the "Warrior," and came next to the "Achilles."

The performance of the "Lord Warden" was in itself, and all things considered, more excellent even than that of the "Achilles," while the miserable performance of the "Lord Clyde" (a sister ship to the "Lord Warden") on this occasion, when her engines were in bad order and supplied with bad coal, shows how very necessary it is in such matters to discriminate between the ship and the engine.

I entirely concur with Admiral Warden in thinking that the low power developed by the engines of the "Bellerophon," and by some others of the new type, is a matter for grave reflection, especially as they were intended to develop as much power as the engines of the "Achilles" and "Minotaur." Their Lordships are aware that the serious attention of the contractors has been called to these facts, and that their bearing upon future engines will be carefully considered.

If all the ships in this trial had been in a state of equality as to the working order of their engines, the goodness of their coal, the skill of their stokers, and the state of their hulls under water, more valuable results would have been obtained, and we should not probably have found the "Minotaur," "Bellerophon," and "Warrior" so largely beaten by the "Lord Warden"; nor would the latter perhaps have shown, as she did, a relative superiority over the "Achilles," compared with the maximum performances of both ships.

If, owing to the circumstances I have recited, the "Bellerophon" took a bad place in the trial, the "Minotaur" was relatively quite as bad, both being, in this instance, very inferior to the "Achilles" and "Lord Warden."

But even this trial, under circumstances which render comparisons almost impossible, clearly shows that the great qualities of offence and defence possessed by the "Lord Warden," and her remarkable handiness under steam, are not counterbalanced by any material superiority in the speed of the "Achilles."

After the most careful consideration, therefore, I can see no encouragement whatever in these Reports to return to the construction of unhandy, long, and comparatively slightly armoured ships; on the contrary, these Reports of Admiral Warden, so far as they go, thoroughly confirm the propriety of the changes that have been made in the forms of ships recently constructed—less length and greater fighting power, combined with handiness, having been secured to them. The engines of the new type alone give cause for dissatisfaction, and they only in some instances, the peculiarities of which are now undergoing the most careful inquiry.

I am, &c.
(signed) *Robert Spencer Robinson.*

— No. 10. —

APPENDIX.

LETTER from Admiral *Warden* to the Secretary of the Admiralty.

(Forwarding Reports of Trial.)

(No. 135.—Nine Enclosures.)

Sir, "Minotaur," at Queenstown, 19 September 1867.

I HAVE the honour to forward herewith, for the information of the Lords Commissioners of the Admiralty, reports of the trials, up to the present time, of the ships named in the margin; also a Table showing the Mean Results obtained by each ship, observing that the "Pallas" had not joined the Squadron in time to take part in them.

"Minotaur."
 "Bellerophon."
 "Achilles."
 "Lord Clyde."

2. Rolling Returns and Abstracts are also enclosed.

I have, &c.
 (signed) *Fredk. Warden*,
 Rear Admiral Commanding.

The Secretary of the Admiralty.

SCHEDULE of ENCLOSURES in foregoing LETTER.

No.	SUBJECT.	PAGE.
1	"Minotaur," Reports of Trials - - - - -	15 to 19
2	"Bellerophon" - - ditto - - - - -	19 to 22
3	"Achilles" - - ditto - - - - -	23 to 29
4	"Lord Clyde" - - ditto - - - - -	29 to 31
5	Table showing Mean Results obtained at 5 knots - - - - -	32
6	Ditto - - - - - 7 knots - - - - -	32
7	Ditto - - - - - full speed - - - - -	32
8	Abstracts of Rolling Returns - - - - -	32, 33
9	Eight Rolling Returns - - - - -	34 to 69

Enclosure 1.

"MINOTAUR."—REPORT of TRIAL, 12th August 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Hour.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
										Force.	Direction.		Maximum.	Minimum.	
Minotaur -	1867 : 12 Aug.	A.M.	Hours.	Knots.											
		8 0	10	5	636·8	26·5	2,520	3·95	W. $\frac{1}{2}$ S.	2	East	Smooth water	Nil	Nil.	
		9 0	-	-	461·32	23·3	1,960	4·24	"	"	E.S.E.				
		10 0	-	-	492·8	23·9	2,240	4·52	"	"	"				
		11 0	-	-	561·26	24·5	2,240	3·99	"	3	"				
		12 0	-	-	657·48	26·1	1,960	2·89	"	"	"				
		P.M.													
		1 0	-	-	607·38	24·5	1,400	2·29	"	4	"				
		2 0	-	-	469·7	24·5	1,400	2·98	"	"	"				
		3 0	-	-	418·24	23·8	1,680	4·01	"	3	"				
		4 0	-	-	540·36	24·4	1,960	3·62	"	"	"				
		5 0	-	-	669·7	26	1,960	2·95	"	"	"				

(signed) N. Bowden Smith, Commander.
(Captain on Sick Leave.)

(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIAL, 23rd August 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Minotaur -	1867 : 23 August	Hours.	Knots.											
		8	7·5	1465·5	33·3	4,760	3·25	E. $\frac{1}{2}$ S.	2	N.W.	Sea smooth -	Nil	Nil.	
			7·0	1377·9	32·6	4,480	3·25	"	2	"				
			7·0	1306	32·3	5,600	4·2	"	1	"				
			7·0	1295·6	33·1	5,880	4·55	"	2	"				
			7·0	1306	33·3	5,040	3·85	"	"	"				
			7·5	1327·9	33·6	5,880	4·4	"	"	"				
			7·5	1559·3	34	5,880	3·77	"	"	"				
			7·5	1477	32·5	6,440	4·3	"	3	"				

(signed) N. Bowden Smith, Commander.
(Captain on Sick Leave.)

(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIAL, at Plymouth, 2nd September 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Minotaur -	1867 : 2 September	Hours.	Knots.											
		5½	8	2026·9	38·9	5,600	2·76	West	3	East	Smooth	Nil	Nil.	
			8	1984·1	38·9	5,880	2·96	"	"	"				
			8	2035·14	38·8	5,600	2·74	"	"	"				
			8	2092·8	40·8	7,000	3·34	"	"	"				
			8	1788·12	36·7	5,880	3·29	"	"	"				
			8	1879·3	37·8	7,000	3·72	W.N.W.	4	N.E.				

(signed) N. Bowden Smith, Commander.
(Captain on Leave.)

(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIALS, 4th, 5th, and 6th of September 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Minotaur	1867 : 4 Sept.	44 hours.	Knots.											
			7.5	-	37.4	7,700	-	W. S. $\frac{1}{2}$ S.	7	S. W.	ahead	-	None perceptible.	
			7.5	-	37.3	5,544	-	-	-	-	ditto	-		
			7.0	1788.12	37.3	6,468	3.6	-	-	-	ditto	-		
			3.7	-	25.5	4,312	-	N. W.	8	-	ditto	-		
			1.5	-	8.8	2,464	-	-	-	-	ditto	-		
			2.5	-	14.8	5,544	-	W. S. $\frac{1}{2}$ S.	7	-	long swell	-		
			7.5	-	40.3	10,780	-	-	8	-	ahead	-		
			7.5	-	43.2	11,704	-	-	-	-	ditto	-		
			7.2	2812.	40.9	9,856	4.2	-	7	west	ditto	-		
			7.2	-	40.5	8,008	-	W. $\frac{1}{2}$ N.	-	-	ditto	-		
			7.2	-	41.6	12,936	-	-	6	-	ditto	-		
			7.2	2767.	42.5	9,240	3.33	-	-	-	ditto	-		
			7.2	-	35.9	12,012	-	-	-	-	ditto	-		
7.2	2887.		39.3	10,780	3.7	-	-	-	ditto	-				
Ditto	5 Sept.		7.2	-	42.3	9,548	-	-	5	W.S.W.	ditto	-	None.	
			7.2	-	41.1	11,088	-	-	6	-	ditto	-		
			7.2	-	42.0	12,320	-	-	-	-	ditto	-		
			7.8	-	43.1	12,320	-	N. N. W.	7	-	ditto	-		
			7.0	2408.	26.6	11,088	4.6	-	-	-	ditto	-		
			8.0	-	44.2	12,936	-	-	-	-	heavy long	- 12		
			7.0	-	38.6	7,393	-	-	8	-	ditto	- 10		
			4.0	-	12.4	3,696	-	-	7	-	ditto	- 10		
			-	stopped engines	-	2,464	-	N. W. N.	-	-	ditto	- 10		
			-	-	-	3,080	-	N.N.W. $\frac{1}{2}$ W.	-	-	ditto	- 10		
			5.0	-	24.9	8,008	-	-	-	-	ditto	- 10		
			7.0	2358.	34.2	10,780	4.57	N.N.W. $\frac{3}{4}$ W.	7	-	ditto	- 10		
			7.5	-	37.9	9,856	-	N.N.W. $\frac{1}{2}$ W.	-	-	ditto	- 10		
			6.0	-	38.7	10,472	-	-	-	-	ditto	- 10		
Ditto	6 Sept.		7.3	2341.8	36.6	9,240	3.94	-	-	-	ditto	- 10		
			7.6	-	40.3	10,472	-	-	8	-	ditto	- 10		
			7.6	-	39.1	9,856	-	-	-	-	ditto	- 10		
			7.5	-	36.1	9,240	-	-	-	-	ditto	- 10		
			7.0	987.1	29.4	5,544	5.6	-	-	-	ditto	- 10		
			7.0	-	31.9	5,236	-	-	-	-	ditto	- 19		
			6.8	1200.7	32.0	6,160	5.1	-	-	-	ditto	- 10		
			7.0	-	33.9	6,468	-	-	-	-	ditto	- 10		
			6.8	-	34.0	6,468	-	-	-	-	ditto	- 10		
			6.0	-	34.2	7,700	-	-	7	-	ditto	- 10		
			4.5	-	38.5	8,624	-	-	-	-	ditto	- 10		
			6.0	3036.	31.3	11,088	3.6	N. E. $\frac{1}{4}$ E.	8	-	heavy long, with high sea.	- 10		
			7.0	-	43.9	11,704	-	-	-	-	ditto	- 10		
			7.5	-	42.7	11,088	-	-	-	-	ditto	- 19		
8.5	-		42.2	12,628	-	-	-	-	ditto	- 11				
8.0	-		31.4	4,620	-	-	-	-	ditto	- 14				

(signed) J. G. Goodenough,
Captain.(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIAL, 12th August 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Hour.	Length of Trial.	No. of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour, by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Minotaur -	1867. 12 Aug.	A.M. 8 0 9 0 10 0 11 0 12 0 P.M. 1 0 2 0 3 0 4 0 5 0	Hours. 10	20 20 20 20 20 20 20 20 20 20	23 22.5 22 22 24 23 22 22 22 22.5	27½ 26 27 27½ 27½ 28 28 28 28 27.5	5.43 4.43 4.6 5.11 5.79 5.53 4.28 3.93 4.94 5.94	636.8 461.32 492.8 561.26 657.48 697.38 469.7 418.24 540.36 669.7	3.95 4.24 4.52 3.99 2.89 2.29 2.98 4.01 3.62 2.95	Lbs. 2,520 1,960 2,240 2,240 1,960 1,400 1,400 1,680 1,960 1,960	1,590 1,407 1,435 1,470 1,570 1,470 1,469 1,425 1,465 1,565	5	Light wind aft, smooth water. Steam could have been kept for the required speed with fewer fires, but I consider that better results are obtained by the fuel being burnt slowly; to effect this object five boilers were used.

(signed) N. Bowden Smith, Commander
(Captain on leave).(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIAL, 23rd August 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	No. of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour, by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Minotaur -	1867. 23 Aug.	Hours. 8	24	18 18 20 20 20 21 21 21	28 27½ 27½ 28 28 28 28 27½	9.34 9.04 8.57 8.5 8.57 8.71 10.23 9.69	1465.5 1377.9 1306. 1295.6 1306. 1327.9 1559.3 1477.	Lbs. 3.25 3.25 4.2 4.55 3.85 4.4 3.77 4.3	Lbs. 4,760 4,480 5,600 5,880 5,040 5,880 5,880 6,440	2,003 1,959 1,940 1,990 2,000 2,019 2,041 1,950	7.5 7.0 " " " 7.5 " "	None.

(signed) N. Bowden Smith, Commander
(Captain on leave).(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIAL, 2nd September 1867.

(General Form, No. 2.—For Engine Room.)

Name of Ship.	Date.	Length of Trial.	No. of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour, by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Minotaur -	1867. 2 Sept. -	Hours. 5½	24 24 24 24 24 24	20 20 19 20 20 20	27 27½ 27½ 27½ 27½ 27½	11.62 11.36 11.7 11.47 10.78 11.09	2026.9 1984.1 2035.14 2092.8 1788.12 1879.3	2.76 2.96 2.74 3.34 3.29 3.72	Lbs. 5,600 5,880 5,600 7,000 5,880 7,000	2,335 2,338 2,330 2,447 2,200 2,270	8. " " " " "	

(signed) N. Bowden Smith, Commander
(Captain on leave).(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIALS, 4th, 5th, and 6th September 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Minotaur	1867 : 4 September -	44 hours.	24	16	27	-	-	-	Lbs. 7,700	2,245	7.5	
			24	18	26½	-	-	-	5,544	2,240	7.5	
			32	18	26½	10.78	1786.12	3.6	6,468	2,240	7.0	
			32	18	26½	Stopped the engines at 3.30, working occasionally till 5.5 p.m., proceeded as usual.			4,312	1,534	3.7	
			32	22	26				2,464	53	1.5	
			32	22	26				5,544	888	2.5	
			32	21	26	-	-	-	10,780	2,418	7.5	
			32	21	26	-	-	-	11,704	2,592	7.5	
			32	23	26	14.59	2812	4.2	9,856	2,456	7.2	
			32	18	26	-	-	-	8,008	2,430	7.2	
			32	12	26	-	-	-	12,936	2,464	7.2	
			32	13	26	14.7	2767	3.33	9,240	2,550	7.2	
			32	18	26½	-	-	-	12,012	2,106	7.2	
			32	17	26½	14.98	2887	3.7	10,780	2,358	7.2	
			32	20	26½	-	-	-	9,548	2,538	7.2	
			32	20	26½	-	-	-	11,088	2,468	7.2	
			32	20	26½	-	-	-	12,320	2,520	7.2	
			32	21	26	-	-	-	12,320	2,590	7.8	
			32	29	26	12.79	2408	4.6	11,088	1,600	7.0	
			32	19	26	-	-	-	12,936	2,653	8.0	
Ditto	5 September -	44 hours.	32	19	26½	-	-	-	7,393	2,317	7.0	
			32	20	Stopped engines at 9.40 p.m., and banked fires.				3,696	743	4.0	
			32	10	-	-	-	-	2,464	-	-	
			32	20	At 2 p.m., proceeded under steam				3,080	-	-	
			32	20	26½	-	-	-	8,008	1,494	5.0	
			32	20	26½	13.15	2358	4.57	10,780	2,053	7.0	
			32	20	26½	-	-	-	9,856	2,273	7.5	
			32	20	26½	-	-	-	10,472	2,322	6.0	
			32	22	26½	13.06	2341.8	3.94	9,240	2,198	7.3	
			32	22	26½	-	-	-	10,472	2,418	7.6	
			32	20	27	-	-	-	9,856	2,346	7.6	
			32	20	27	-	-	-	9,240	2,170	7.5	
			32	20	27	7.34	987.1	5.6	5,544	1,768	7.0	
			32	20	27	-	-	-	5,236	1,918	7.0	
Ditto	6 September -	44 hours.	32	20	27	8.37	1200.7	5.1	6,160	1,924	6.8	
			32	20	27	-	-	-	6,468	2,036	7.0	
			32	20	27	-	-	-	6,468	2,044	6.8	
			32	20	27	-	-	-	7,700	2,053	6.0	
			32	18	26½	-	-	-	8,624	2,312	4.5	
			32	22	26½	15.05	3036	3.6	11,088	1,880	6.0	
			32	22	26½	-	-	-	11,704	2,639	7.0	
			32	18	26½	-	-	-	11,088	2,566	7.5	
			32	22	26½	-	-	-	12,628	2,534	8.5	
			32	22	-	-	-	-	4,620	1,885	8.0	

(signed) J. G. Goodenough,
Captain.(signed) John Sanders,
Chief Engineer.

"MINOTAUR."—REPORT of TRIAL, 23rd August 1867.
(General Form, No. 3.)

Name of Ship.	Date.	Maximum Amount of Horse Power developed at the measured Mile under favourable circumstances.	Deduct 10 per Cent. on expected Amount of Horse Power to be developed at Sea under ordinary circumstances.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Abeam, Ahead, or Quarter.	Degrees of Rolling.		REMARKS.
											Force.	Direction.		Maximum.	Minimum.	
Minotaur -	1867. 23 Aug.	6951·736	13·95 per cent. difference between power on measured mile and at sea.	2 hours. 9 30	<i>Knots.</i> 12·5	5981·8	56·1	19,540	3·26	E. $\frac{1}{2}$ S.	3	N.W.	Very moderate on quarter.	5	1	The reduction in the number of revolutions was on account of the trunk bearings becoming a little heated.
		Ditto	15·22 ditto	10 30	11·0	5893	55	19,540	3·31	E. $\frac{1}{2}$ S.	2	N.W.	ditto	-	3	

(signed) *N. Bowden Smith*, Commander,
(Captain on sick leave.)

(signed) *John Sanders*,
Chief Engineer.

Enclosure 2.

"BELLEROPHON."—REPORT of TRIAL, 12th August 1867.
(General Form, No. 1.)

Name of Ship.	Date.	Hour.	Length of Trial.		Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coals per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses. Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
											Force.	Direction.		Maximum.	Minimum.	
Bellerophon	1867. 12 Aug.	A. M.	Hours.	Knots.												
		7 to 8	10	5	717·98	31	2,100	2·89	W.	3	E.	Very little Sea, and astern.	No motion	No motion		
		8 " 9	-	5	682·01	30½	1,500	2·2	"	3	"					
		9 " 10	-	5	622·23	29¾	1,200	1·93	"	3	"					
		10 " 11	-	5	635·5	29¾	1,500	2·36	"	3	"					
		11 " 12	-	5	730·	30	900	1·23	"	3	"					
		P. M.														
		12 to 1	-	5·2	756·9	30¾	1,240	1·54	"	2 to 3	"	Noon - Very little Sea, and astern.	Noon.	No motion	No motion	
		1 " 2	-	5·2	610·32	30	1,240	2·06	"	2 to 3	"					
		2 " 3	-	5·	555·144	28	1,240	2·23	"	2 to 3	"					
		3 " 4	-	5·0	555·4	29	1,240	2·25	"	2	"					
		4 " 5	-	4·8	672·62	29½	2,240	3·33	W. by N. ¼ N.	2	"					
		Mean	-	-	5·02	653·81	29·8	1,440	2·202	-	-	-	-	-	-	-

(signed) *R. J. J. G. Macdonald*,
Captain.

(signed) *Fredk. J. Newton*,
Chief Engineer.

"BELLEROPHON."—REPORT of TRIAL, 23rd August 1867.
(General Form, No. 1.)

Name of Ship.	Date.	Hour.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coals per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees o Rolling.		REMARKS.	
										Force.	Direction.		Maximum.	Minimum.		
Bellerophon	1867. 23 Aug.	P.M.	Hours.	Knots.												
		12 to 1	8	7·0	1297·27	39·99	4,368	3·35	E. $\frac{1}{2}$ N.	1 to 2	W.N.W.	Very slight westerly swell.	2	—	By patent log, 64 miles.	
		1 " 2	—	7·0	1280·3	40·16	4,368	3·41	"	1 to 2	"					
		2 " 3	—	7·0	1269·06	39·21	4,480	3·53	"	1 to 2	"					
		3 " 4	—	7·0	1280·3	40·0	4,368	3·41	"	0	Calm					
		4 " 5	—	7·0	1258·08	40·56	4,256	3·38	"	0	"					
		5 " 6	—	7·2	1338·66	40·53	4,256	3·18	"	1	S.W.					
		6 " 7	—	7·0	1117·05	40·45	4,368	3·91	"	1	"					
		7 " 8	—	7·0	1111·59	39·78	4,368	3·93	"	1	"					
		Mean	—	—	7·0	1244·04	40·06	4,354	3·512	—	—	—	—	—		

Approved. (signed) *R. J. J. G. Macdonald*,
Captain.

(signed) *Fredk. J. Newton*,
Chief Engineer.

REPORTS, &c. RELATIVE TO

"BELLEROPHON."—REPORT of TRIAL, 2nd September 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Hour.	Length of Trial.		Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coals per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
			Force.	Direction.							Maximum.	Minimum.				
Bellerophon	1867: 2 Sept.	A.M. to A.M.	Hr.	Min.	Knots.											
		From 8 30 to 9 30	5	25	8	2162.614	50	4,256	1.96	W. by N.	1 to 2	S.S.E.	Port Bow	Nil	Nil	
		" 9 30 " 10 30	-	-	-	1801.895	48	4,256	2.36	"	"	"	"			
		" 10 30 " 11 30	-	-	-	1907.797	48½	4,256	2.23	"	"	"	"			
		P.M.														
		" 11 30 " 12 30	-	-	-	1758.411	48	5,152	2.93	"	"	"	"			
		P.M.														
		" 12 30 " 1 30	-	-	-	1801.697	48	4,480	2.48	"	3	"	"			
		" 1 30 " 1 55	-	-	-	1745.245	48½	2,240	2.56	W.N.W.	3	E.	"			
		Mean	-	-	-	1879.609	48½	4,480	2.4	-	-	-	-			

Approved.

Captain on Leave,
(signed) *H. W. Brent*, Commander.(Signed) *Fredk. J. Newton*, Chief Engineer.

"BELLEROPHON."—REPORT of TRIAL, 12th August 1867.

(General Form, No. 2.—For Engine Room.)

Name of Ship.	Date.	Hour.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram, per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power, per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour, by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Bellerophon	1867: 12 Aug.	A.M.	Hours.			Fore.	Aft.		Lbs.	Lbs.		Knots.	
		7 to 8	10	16	21	26 - 28	5.599	717.98	2.89	2,100	1,946	5'	Ship's bottom, though recently hogged, still very foul.
		8 " 9	-	16	21	26 - 28	5.406	682.01	2.2	1,500	1,795	5'	
		9 " 10	-	16	20½	26½ - 27½	5.056	622.23	1.93	1,200	1,773	5'	
		10 " 11	-	16	20½	26½ - 27½	5.164	635.5	2.36	1,500	1,779	5'	
		11 " 12	-	16	20½	26 - 27½	5.937	730	1.23	900	1,765	5'	
		P.M.											
		12 " 1	-	16	20	25½ - 27½	6	756.9	1.54	1,240	1,854	5.2	
		1 " 2	-	16	20	26 - 26½	4.918	610.32	2.06	1,240	1,768	5.2	
		2 " 3	-	16	20	26 - 27	4.793	555.144	2.23	1,240	1,675	5'	
		3 " 4	-	16	20	26 - 26½	4.587	555.4	2.25	1,240	1,780	5'	
		4 " 5	-	16	20	26 - 26½	5.512	672.62	3.33	2,240	1,780	4.8	By Patent Log, 58 Knots.
		Mean	-	16	20.35	26 - 27.2	5.302	653.81	2.202	1,440	1791.5	5.02	By Patent Log, 58 Knots.

(signed) *R. J. J. G. Macdonald*, Captain.(Signed) *Fredk. J. Newton*, Chief Engineer.

"BELLEROPHON."—REPORT of TRIAL, 23rd August 1867.

(General Form, No. 2.—For Engine Room.)

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse-power per Hour.	Coals used per Indicated Horse-power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour, by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Bellerophon	1867.	<i>Hs. Min.</i>			<i>Fore.</i>	<i>Aft.</i>		<i>Lbs.</i>	<i>Lbs.</i>			
	23 August	2 40	32	25	25 25	16.737	4368.67	3.74	16,352	3,753	6.5	Time from 8.25 a.m. till 11.5 a.m.
			32	25	25 25	16.962	4701.06	2.85	13,440	3,783	11.8	Boilers priming a little; bringing engines up to 60 revolutions occasionally;
			32	25	24½ 25	16.36	4669.05	2.87	6,720	2,784	11.8	fore engine on the first grade of expansion; after engine full power.
	Mean	- - -	-	25	24.8 25	16.686	4579.6	3.16	13,290	3,937	11.8	

Approved.

(signed) *R. J. J. G. Macdonald*, Captain.(signed) *Frederick J. Newton*, Chief Engineer.

"BELLEROPHON."—REPORT of TRIAL, 23rd August 1867.

(General Form, No. 2.—For Engine Room.)

Name of Ship.	Date.	Hour.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour, by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Bellerophon	1867 : 23 Aug.	P. M. 12 to 1	Hours.	16	20	Fore. Aft.	7.649	1297.27	3.35	Lbs.	Lbs.	Knots.	By Patent Log, 64 Miles.
		1 " 2	8	16	20	25½ - 27	7.549	1280.3	3.41	4,368	2,399	7.0	
		2 " 3	—	16	18	25½ - 26½	7.549	1269.06	3.53	4,368	2,410	7.0	
		3 " 4	—	16	19	26 - 27½	7.549	1280.3	3.41	4,480	2,353	7.0	
		4 " 5	—	16	20	26 - 25½	7.418	1258.08	3.38	4,368	2,400	7.0	
		5 " 6	—	16	21	25½ - 28	7.486	1338.66	3.18	4,256	2,434	7.0	
		6 " 7	—	16	20	25 - 28	6.751	1117.05	3.91	4,256	2,422	7.2	
		7 " 8	—	16	20	25½ - 28	6.712	1111.59	3.93	4,368	2,427	7.0	
		Mean - - -			19.75	25.6 - 27.25	6.586	1244.04	3.512	4,354	2,404	7.0	

Approved.

(Signed) R. J. J. G. Macdonald, Captain.

(Signed)

Fredk. J. Newton,
Chief Engineer.

"BELLEROPHON."—REPORT of TRIAL, 2nd September 1867.

(General Form, No. 2.—For Engine Room.)

Name of Ship.	Date.	Hour.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagrams per Hour.	Mean Indicated Horse-power per Hour.	Coals used per Indicated Horse-power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Bellerophon	1867. Sept.	A. M. From 8.30 to 9.30	Hs. Min.	24	20	Fore. Aft.	10.456	2162.614	1.96	Lbs.	Lbs.		
		" 9.30 " 10.30	5 25	"	21	26½ 27	9.075	1801.895	2.36	4,256	2,995	8	
		" 10.30 " 11.30	—	"	21	27 27	9.581	1907.797	2.23	4,256	2,894	"	
		A. M. P. M. " 11.30 " 12.30	—	"	21	27 27	8.856	1758.411	2.93	5,152	2,882	"	
		P. M. " 12.30 " 1.30	—	"	19	27 27	9.074	1801.697	2.48	4,480	2,885	"	
		" 1.30 " 1.55	—	"	20	27 27½	8.699	1745.245	2.56	2,240	2,793	"	
		Mean - - -		24	20.3	27 27	9.29	1879.609	2.40	4,480	1,213	8	

Approved.

Captain on Leave.
(signed) H. W. Brent, Commander.

(signed)

Frederick J. Newton,
Chief Engineer.

"BELLEROPHON."—REPORT of TRIAL, 23rd August 1867.

(General Form, No. 3.)

Name of Ship.	Date.	Maximum Amount of Horse- power developed at Measured Mile under favourable cir- cumstances of every kind.	Deduct 10 per cent. as expected Amount of Horse- power to be developed at Sea under ordinary circumstances.	Length of Trial.	Speed.	Indicated Horse-power.	Number of Revolutions per Minute.	Consumption of Coals per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse-power.	Courses Steered.	Wind.		State of Sea, whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
											Force.	Direction.		Maximum.	Minimum.	
Bellerophon	1867. 23 Aug.	19 March 1866. 6048	5444	Hs. Min.	Knots.								Slight westerly swell.	3	Time from 8.25 a.m. till 11.5 a.m.	
		17 Aug. 1866. 6522	5870	-	11.8 6.5	4701.0 4669.5	63.1 69.6	13,440 6,720	2.85 2.87	" "	" "	" "		" "	Boilers priming a little, bringing engines up to 60 revolutions occasionally.	
		Mean -			11.8	4579.6	65.1	13,290	3.16	"	"	"		"	Fore engine on the first grade of expansion.	
																After engine full power.

Approved.

(signed) R. J. J. G. Macdonald, Captain.

(signed)

Frederick J. Newton,
Chief Engineer.

“ BELLEROPHON ” (1,000 H. P.)—REPORT of TRIALS, from 4th to 6th September 1867.

Date.	Hour.	Revolutions per Minute.	Revolutions by Counter, per Hour.	Revolutions Mean per Hour by Watch.	Coals in Lbs. per Hour.	REMARKS.
Wednesday, 4 Sept. 1867.	10 a.m.	- -	- -	- -	6,720	Coals. Revolutions. Up to noon, 7 tons 4 cwt - - 3,123.
	11 „	- -	- -	- -	4,704	
	12 „	52	3,123	- -	4,704	
	1 p.m.	48	2,760	- -	6,272	Counter broken.
	2 „	48	2,820	- -	4,928	
	3 „	49	2,880	- -	6,720	
	4 „	Various.	1,575	- -	2,240	
	5 „	Nil.	- -	Nil.	1,008	
	6 „	50	- -	1,000	3,360	
	7 „	55	- -	3,300	5,824	
	8 „	57	- -	3,420	6,496	
	9 „	56	- -	3,360	8,400	
	10 „	51	- -	3,060	8,064	
	11 „	52	- -	3,121	5,376	
	12 „	53	- -	3,180	6,720	Coals. Revolutions. Up to midnight, 36 tons 8 cwt. - 33,599.
Thursday, 5 Sept. 1867.	1 a.m.	52	- -	3,120	8,960	Coals. Revolutions. Up to noon, 76 tons 13 cwt. - 62,414.
	2 „	49	- -	2,940	7,392	
	3 „	51	- -	3,060	7,056	
	4 „	50	- -	3,180	6,720	
	5 „	52	- -	3,120	9,968	
	6 „	58	- -	3,480	10,080	
	7 „	53 to 40	- -	2,190	8,400	
	8 „	57	- -	3,420	10,640	
	9 „	54	- -	2,820	12,208	
	10 „	54 to 30	- -	1,485	4,704	
	11 „	- -	- -	- -	-	
	12 „	- -	- -	- -	3,248	
Friday, 6 Sept. 1867.	1 p.m.	- -	- -	- -	-	Coals. Revolutions. Up to midnight, 113 tons 8 cwt. 91,034.
	2 „	30	- -	900	10,640	
	3 „	43	- -	2,580	8,400	
	4 „	48	- -	2,880	8,960	
	5 „	48	- -	2,880	6,720	
	6 „	45	- -	2,700	7,840	
	7 „	52	- -	3,120	6,720	
	8 „	52	- -	3,180	8,960	
	9 „	50	- -	3,000	8,400	
	10 „	48	- -	2,880	8,400	
	11 „	37	- -	2,220	3,360	
	12 „	38	- -	2,280	3,920	
Friday, 6 Sept. 1867.	1 a.m.	38	- -	2,280	6,160	Coals. Revolutions. Up to 10-30 a.m. 142 tons - 117,274.
	2 „	38	- -	2,280	6,160	
	3 „	39	- -	2,340	6,160	
	4 „	40	- -	2,400	7,840	
	5 „	43	- -	2,580	6,720	
	6 „	38	- -	2,280	3,360	
	7 „	42	- -	2,580	6,160	
	8 „	51	- -	3,000	7,392	
	9 „	48 to 60	- -	3,060	7,392	
	10 „	Various.	- -	3,000	6,760	
	11 „	- -	- -	500	-	

Approved.

(signed) *R. J. J. G. Macdonald,*
Captain.(signed) *Fredk. J. Newton,*
Chief Engineer.

Enclosure 3.

"ACHILLES."—REPORT of TRIAL, 12th August 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Indicated Horse Power per Hour.	Course Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Achilles - -	1867: 12 Aug. -	7 to 8	<i>Knots.</i> 5.5	550.89	24	2,133	3.87	W. ½ S.	2	E. ½ N.	Port Quarter	None	None	
		8 „ 9	5.5	498.08	22	1,631	3.27	„	2	S.E. by E. ½ E.	- „ -	„	„	
		9 „ 10	5.5	360.60	20	1,255	3.48	„	3	do.	- „ -	„	„	
		10 „ 11	5.5	382.83	21	1,380	3.60	„	3	S. E. ½ E.	- „ -	„	„	
		11 „ 12	5.5	470.58	22	1,631	3.46	„	3	do.	- „ -	„	„	
		12 „ 1	5.5	485.99	23	2,032	4.18	„	3	do.	- „ -	„	„	
		1 „ 2	5.5	519.11	23	2,286	4.40	„	3	do.	- „ -	„	„	
		2 „ 3	5.5	388.08	21	1,820	4.68	„	2 to 3	E. S. E.	- „ -	„	„	
		3 „ 4	5.5	386.19	21	1,690	4.37	„	2	E. ½ S.	- „ -	„	„	
		4 „ 5	5.5	497.24	22.5	2,016	4.05	„	2	do.	Aft.	„	„	
		Mean - - -	5.5	453.95	21.95	1787.4	3.93	-	2.5					

(signed) *E. W. Vansittart,*
Captain.(signed) *John McKie,*
Chief Engineer.

"ACHILLES."—REPORT of TRIALS, 14th and 15th August 1867.

(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Indicated Horse Power per Hour.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Achilles - -	1867: 14 Aug. -	11 to 12	<i>Knots.</i> 5.5	431.07	21.5	1,560	3.61	WNW.	2 to 3	S. W.	Port Quarter	2	-	Engines stopped 15 min. do. do. 7 „
		12 „ 1	6	550.80	24	1,530	2.77					2	-	
		1 „ 2	6	555.12	24	1,820	3.27					3	1	
		2 „ 3	6	510.29	23	1,548	3.02					4	1	
		Mean - - -	5.9	511.82	23.01	1,614	3.17							
Achilles - -	1867: 15 Aug. -	9 to 10	<i>Various.</i>	<i>Various.</i>	21	3,163	<i>Various.</i>	<i>Various.</i>	4	S. E.	<i>Smooth.</i>	2	1	Engines stopped several times, and worked at various speeds, ranging from 18 to 34 revolutions.
		10 „ 11			27 ½	3,156			7	N. E.		2	-	
		11 „ 12			26 ½	3,156			7	North.		2	-	
		12 „ 1			21 ¼	789			2	„		2	-	
		1 „ 2			None.	526			2	„		2	-	
		2 „ 3			25 ¼	2,377			2	„		2	1	
		3 „ 4			25	1,841			2	„		-	-	
		Mean - - -				2,144								

(signed) *E. W. Vansittart,*
Captain.(signed) *John McKie,*
Chief Engineer.

REPORTS, &c. RELATIVE TO

"ACHILLES."—REPORT of TRIALS, 16th, 19th, and 21st August 1867.
(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Indicated Horse Power per Hour.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or on Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Achilles	1867: 16 Aug.	10 to 11	Various.		24	1,596	Various.	S. E. -	3 to 4	N. N. W.	Starboard quarter	1.5	0.5	Engines cutting off at $\frac{1}{2}$. Working at various speeds while performing evolutions; ranging from 18 to 32 revolutions.
		11 " 12			25 $\frac{1}{2}$	1,820		N. W.	"	"	" bow -	2.5	1.0	
		12 " 1			18	1,064		"	"	"	" " -	2.0	1.0	
		1 " 2			Nil	1,056		"	"	"	" " -	2.5	1.0	
		2 " 3			15 $\frac{1}{2}$	532		N. W. $\frac{1}{2}$ W.	"	W. by N.	Port bow -	3.0	2.0	
		Mean -	-	-	-	1,213								
Achilles	19 Aug.	10 to 11	Knots.	Various.	27	3,168	Various.	N. W. by W.	2 to 3	W. S. W.	Starboard quarter	3.0	1.0	Engines cutting off at $\frac{1}{2}$. Working at various speeds while performing evolutions; ranging from 16 to 36 revolutions.
		11 " 12			25	3,730		"	"	"	" " -	3.0	1.0	
		12 " 1			21 $\frac{1}{2}$	3,216		"	"	"	" " -	3.0	1.0	
		1 " 2			24 $\frac{1}{2}$	2,403		N. W. $\frac{1}{2}$ W.	4 to 5	"	" " -	2.5	1.0	
		2 " 3			21	771		"	"	"	" " -	3.0	1.5	
		Mean -	-	-	-	2,657								
Achilles	21 Aug.	10 to 11	5.0		24.3	2,128		S. E. $\frac{3}{4}$ E.	1	S. E. by S. $\frac{1}{2}$ S.	Starboard bow	0.5	-	Engines cutting off at $\frac{1}{2}$. Speed very irregular, on account of performing evolutions; ranging from 16 to 36 revolutions.
		11 " 12	6.0		22 $\frac{1}{2}$	1,560		"	1 to 2	"	" " -	-	-	
		12 " 1	6.0		22 $\frac{1}{2}$	2,670		S. S. W.	"	"	Port beam	-	-	
		1 " 2	6.0		21 $\frac{1}{2}$	2,640		"	"	"	" " -	-	-	
		2 " 3	6.0		23 $\frac{1}{2}$	2,376		"	"	"	" " -	-	-	
		3 " 4	6.0		22 $\frac{1}{2}$	2,358		"	"	S. E. by S.	" " -	-	-	
		4 " 5	6.0		18	548		"	"	"	" " -	-	-	
		Mean -	-	-	-	2,040								

(signed) E. W. Vansittart,
Captain.(signed) John McKie,
Chief Engineer.

"ACHILLES."—REPORT of TRIAL, 23rd August 1867.
(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Indicated Horse Power per Hour.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or on Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Achilles	1867: 23 Aug.	12 to 1	Knots.											
		1 " 2	8.0	1034.88	33	3,640	3.51	E. b. N. $\frac{1}{2}$ N.	2 to 3	N. W. by W.	Port quarter	-	1.0	
		2 " 3	7.5	885.00	30	3,640	4.11	"	"	S. - Easterly	"	-	1.0	
		3 " 4	7.5	946.74	31	3,900	4.01	"	"	"	"	-	1.0	
		4 " 5	7.5	924.11	31	4,160	4.51	"	"	"	"	-	1.0	
		5 " 6	7.5	947.52	31.5	3,640	3.84	"	"	"	"	-	1.0	
		6 " 7	7.5	1014.72	32	3,640	3.57	"	"	"	"	-	1.0	
		7 " 8	7.5	990.04	32	3,640	3.67	"	"	"	"	-	1.0	
		Mean -	-	-	-	-	-	-	-	-	-	-	-	

(signed) E. W. Vansittart,
Captain.(signed) John McKie,
Chief Engineer.

"ACHILLES."—REPORT of TRIAL, 2nd September 1867.
(General Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Indicated Horse Power per Hour.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or on Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Achilles	1867: 2 Sept.	8.30 to 9.30	7.8	1552.65	35	5,632	3.62	W. N. $\frac{1}{2}$ N.	1	North	Starboard quarter	-	-	Steam trial. Speed, 8 knots ditto. ditto. ditto. ditto.
		9.30 " 10.30	7.8	1502.13	34 $\frac{1}{2}$	4,940	3.28	"	1	East	Port quarter	-	-	
		10.30 " 11.30	7.8	1656.55	35	6,023	3.63	"	1 to 2	S. - Easterly.	"	-	-	
		11.30 " 12.30	7.8	1510.06	34 $\frac{1}{2}$	5,720	3.78	"	2 " 3	"	"	-	-	
		12.30 " 1.30	7.8	1469.70	34 $\frac{1}{2}$	5,460	3.71	"	2 " 3	"	"	-	-	
		1.30 " 2.20	7.8	1399.32	34 $\frac{1}{2}$	2,730	3.91	"	2 " 3	"	"	-	-	
		Mean -	-	-	-	-	-	-	-	-	-	-	-	

(signed) E. W. Vansittart,
Captain.(signed) John McKie,
Chief Engineer.

"ACHILLES."—REPORT of TRIALS, 4th, 5th, and 6th September 1867.

(General Order and Form, No. 1.)

Name of Ship.	Date.	Length of Trial.	Indicated Horse Power.	Speed.	No. of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Indicated Horse Power per Hour.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or on Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Achilles	1867: 4 Sept.	12 to 1 p.m.	2037·96	<i>Knots.</i> 8·0	36½	6,812	3·34	West	5 to 7	S.W.b.S.	Short swell on port beam.	No motion.		
		1 to 2 "	-	7·8	35	5,720	-	"	"	"	"	"	"	
		2 to 3 "	-	7·8	35½	5,460	-	"	"	"	"	"	"	
		3 to 4 "	1849·54	4·0	"	1,560	2·95	None	"	"	"	"	"	
		4 to 5 "	-	1·5	"	1,584	-	"	"	S.W.	"	2·0	0·5	
		5 to 6 "	-	3·3	"	6,008	-	W. ½ S.	"	"	"	2·0	0·5	
		6 to 7 "	-	7·5	38	7,948	-	"	"	"	"	2·0	0·5	
		7 to 8 "	1879·36	7·5	35½	7,992	4·25	"	"	"	"	2·0	0·5	
		8 to 9 "	-	7·0	33½	7,252	-	"	"	"	Long swell	2·0	1·0	
		9 to 10 "	-	6·5	32¼	4,978	-	"	5 to 6	"	"	2·5	1·0	
		10 to 11 "	-	6·8	34½	4,192	-	"	"	"	"	2·5	1·0	
		11 to 12 "	1672·80	7·0	34	5,800	3·40	"	"	"	"	3·0	1·0	
		12 to 1 a.m.	-	7·5	38¾	7,252	-	"	"	West	"	3·0	1·5	
		1 to 2 "	-	7·5	34	7,540	-	"	"	"	"	3·0	1·5	
		2 to 3 "	-	7·5	35½	7,336	-	"	"	"	"	3·0	1·5	
		3 to 4 "	2010·42	7·5	36½	8,772	4·31	"	5 to 7	"	"	3·0	1·5	
		4 to 5 "	-	7·5	37½	7,770	-	"	"	W. by S.	"	3·0	1·5	
		5 to 6 "	-	7·7	36½	8,360	-	"	"	"	"	4·0	2·0	
Ditto	5 Sept.	6 to 7 "	-	2·0	Various, & stopped.	5,352	-	N. N. W.	"	"	"	4·5	2·0	
		7 to 8 "	1849·54	7·8	35½	7,770	4·21	"	"	"	"	4·5	2·5	
		8 to 9 "	-	6·0	Various, & stopped.	3,240	-	"	"	"	Very heavy on port beam.	4·5	2·5	
		9 to 10 a.m.	-	6·0	Various, & stopped.	780	-	"	6 to 7	W.S.W.	"	11·0	2·5	
		Screw disconnected at 9.45.											Heel of ship.	
		2 to 3 p.m.	-	8·8	21	4,160	-	N.W. by W.	"	"	"	11·0	3·5	
		3 to 4 "	806·52	8·8	26	4,128	5·10	"	"	"	"	10·0	2·5	
		4 to 5 "	-	8·0	34½	5,180	-	"	"	"	"	9·0	2·0	
		5 to 6 "	-	6·0	26½	4,855	-	N.N.W. ½ W.	"	"	"	10·0	2·5	
		6 to 7 "	-	7·5	32½	5,425	-	"	"	"	"	9·0	2·5	
		7 to 8 "	1512·80	7·8	31	5,355	3·53	"	"	"	"	13·0	3·0	
		8 to 9 "	-	8·0	33½	5,610	-	"	"	"	"	11·0	2·5	
		9 to 10 "	-	8·0	29	4,644	-	"	"	"	"	10·0	2·5	
		10 to 11 "	-	7·5	26½	3,072	-	"	"	"	"	11·0	2·5	
		11 to 12 "	843·36	7·5	24	4,427	5·24	"	"	"	"	12·0	3·0	
		12 to 1 a.m.	-	7·0	26¼	2,590	-	"	"	West	"	13·0	3·0	
		1 to 2 "	-	7·0	27	4,080	-	"	"	"	On beam	11·0	3·0	
		2 to 3 "	-	7·0	28½	4,626	-	"	"	"	"	13·0	3·5	
Ditto	6 Sept.	3 to 4 "	1243·52	7·2	29	4,826	3·87	N. ½ E.	"	"	"	12·0	2·0	
		4 to 5 "	-	7·2	25½	5,180	-	"	"	"	"	10·0	2·0	
		5 to 6 "	-	6·8	20	4,716	-	"	"	"	"	9·0	2·5	
		6 to 7 "	-	8·0	29	4,536	-	"	"	"	"	8·0	2·0	
		7 to 8 "	1797·26	8·0	36½	6,003	3·34	"	"	"	"	8·0	2·0	
		8 to 9 "	-	8·0	32½	4,386	-	"	"	"	"	8·5	1·5	
		9 to 10 "	-	6·0	37	4,193	-	Various	"	"	Aft	8·5	2·0	
								"	"	"	"	7·5	2·0	

(signed) E. W. Vansittart,
Captain.

(signed) John McKie,
Chief Engineer.

"ACHILLES."—REPORT of TRIAL, 12th August 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Achilles	1867: 12 Aug. -	Hours.						Lbs.	Lbs.			Engines worked expansively, cutting off at 1-6th of the stroke.
		7 to 8	16	20	28·5	5·55	550·89	3·87	2,133	1,439	5·5	
		8 to 9	16	20	28·5	5·47	498·08	3·27	1,631	1,317	5·5	
		9 to 10	16	20	28·5	4·36	360·60	3·48	1,255	1,199	5·5	
		10 to 11	16	20	28·5	4·41	382·85	3·60	1,380	1,259	5·5	
		11 to 12	16	20	28·5	5·17	470·58	3·46	1,631	1,320	5·5	
		12 to 1	16	20	28·5	5·11	485·99	4·18	2,032	1,390	5·5	
		1 to 2	16	20	28·5	5·46	519·11	4·40	2,286	1,391	5·5	
		2 to 3	16	20	28·5	4·47	388·08	4·68	1,820	1,260	5·5	
		3 to 4	16	20	28·5	4·45	386·19	4·37	1,690	1,266	5·5	
		4 to 5	16	20	28·5	5·34	497·24	4·05	2,016	1,360	5·5	
	Mean	- - -	16	20	28·5	4·97	453·96	3·936	1,787	1,320	5·5	

Approved.

(signed)

E. W. Vansittart,
Captain.

(signed)

John M'Kie,
Chief Engineer.

"ACHILLES."—REPORT of TRIALS, 14th and 15th August 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during Trial.	Mean Height of Barometer Gauge during Trial.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used by Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Achilles	1867: 14 Aug. -	Hours.						Lbs.	Lbs.			Engines worked expansively, cutting off at 1-6th of the stroke.
		11 to 12	16	20	28·5	4·85	431·07	3·61	1,560	1,290	5·5	
		12 to 1			28·5	5·58	550·80	2·77	1,530	1,441	6·	
		1 to 2			28·75	5·59	555·12	3·27	1,820	1,440	6·	
		2 to 3			28·75	5·37	510·29	3·62	1,543	1,386	6·	
	Mean	- - -	16	20	28·62	5·35	509·45	3·17	1,614	1,389	5·9	
Achilles	15 Aug. -	9 to 10	20	20	29	Various	Various	Various	3,163	320	Various	Screw moved 15 min. " 57 " " 56 " " 29 " " Nil. " 55 " " 59 "
		10 to 11							3,156	1,548		
		11 to 12							3,156	1,485		
		12 to 1							789	616		
		1 to 2							526	None		
		2 to 3							2,377	1,419		
		3 to 4							1,841	1,475		
	Mean	- - -	20	20	29	-	-	-	2,144	1,518	-	

Approved.

(signed)

E. W. Vansittart,
Captain.

(signed)

John M'Kie,
Chief Engineer.

"ACHILLES."—REPORT OF TRIALS, 23rd August 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	No. of Fires used.	Mean Height of Steam Gauge during Trial.	Mean Height of Barometer Gauge during Trial.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used by Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Achilles	1867 : 23 Aug.	8.20 to 9.20	40	25	26	25.36	5667.82	Lbs. 3.22	Lbs. 18,270	3,179	12.5	Trial stopped 10 minutes before completing third hour.
		9.20 to 10.20				25.73	5533.36	3.30	18,270	3,120	12.5	
		10.20 to 11.10				25.75	5570.72	3.35	15,670	2,626	12.5	
		Mean - - -				25.78	5590.63	3.29	15,448	3,150	12.5	
Achilles	23 Aug.	12 to 1	24	20	29	7.58	1034.88	3.51	3,640	1,979	8.0	Engines worked expansively, cutting off at 1.5th of the stroke. Coals very small.
		1 to 2				7.13	885.00	4.11	3,640	1,806	7.5	
		2 to 3				7.38	946.74	4.01	3,900	1,858	7.5	
		3 to 4				7.21	924.11	4.51	4,160	1,860	7.5	
		4 to 5				7.27	947.52	3.84	3,640	1,888	7.5	
		5 to 6				7.67	1014.72	3.57	3,640	1,919	7.5	
		6 to 7				7.49	990.04	3.67	3,640	1,920	7.5	
		7 to 8				7.44	959.88	3.79	3,640	1,890	7.5	
		Mean - - -				7.39	962.86	3.87	3,737	1,890	7.56	

Approved. (signed) E. W. Vansittart, Captain.

(signed) John M'Kie, Chief Engineer.

"ACHILLES."—REPORT OF TRIALS, 16th, 19th, and 21st August 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	No of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used by Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Achilles	1867 : 16 Aug.	10 to 11	12	20	28½	Various	Various	Various	Lbs. 1,596	700	Various	Screw moving 29 minutes.
		11 to 12	12						1,820	698		- " 27 "
		12 to 1	12						1,064	853		- " 48 "
		1 to 2	12						1,056	Nil		- " Nil "
		2 to 3	12						532	644		- " 41 minutes.
		Mean - - -	12						1,213	1,197		Steaming round target.
Achilles	19 Aug.	10 to 11	20	18	27½	Various	Various	Various	3,168	1,614	5.0	Screw moving 59 minutes.
		11 to 12	20	20	28½				3,730	1,495	5.0	- " 60 "
		12 to 1	20	20	28½				3,216	1,293	5.0	- " 59 "
		1 to 2	20	20	28½				2,403	1,290	4.0	- " 52 "
		2 to 3	20	20	28½				771	590	4.0	- " 28 "
		Mean - - -	20	19.6	28.3				2,657	1,461	-	Steaming evolutions.
Achilles	21 Aug.	10 to 11	20	20	28½	Various	Various	Various	2,128	1,388	5.0	Screw moving 57 minutes.
		11 to 12	20						1,560	1,346	6.0	- " 60 "
		12 to 1	20						2,670	1,353	6.0	- " 60 "
		1 to 2	20						2,640	1,272	6.0	- " 60 "
		2 to 3	20						2,376	1,352	6.0	- " 58 "
		3 to 4	20						2,358	1,233	6.0	- " 55 "
		4 to 5	20						548	859	6.0	- " 47 "
		Mean - - -	20						2,040	1,328	5.8	

Approved, (signed) E. W. Vansittart, Captain.

(signed) John M'Kie, Chief Engineer.

"ACHILLES."—REPORT OF TRIAL, 2nd September 1867.

(General Form, No. 2.)

Name of Ship.	Date.	Length of Trial.	No. of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicated Diagrams per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Achilles	1867 : 2 Sept.	8.30 to 9.30	24	20	28¾	10.73	1552.65	3.62	5,632	2,098	7.8	Coals used during Trial : 13 tons, 12 cwt. 46 lbs. No. of Revolutions, 11,443. Engines working expansively, cutting off at 1.5th.
		9.30 to 10.30	24			10.67	1502.13	3.28	4,940	2,069	7.8	
		10.30 to 11.30	24			11.44	1656.55	3.63	6,028	2,101	7.8	
		11.30 to 12.30	24			10.58	1510.06	3.78	5,720	2,070	7.8	
		12.30 to 1.30	24			10.30	1469.70	3.71	5,460	2,071	7.8	
		1.30 to 2.0	24			9.81	1399.32	3.91	2,730	1,034	7.8	

Approved, (signed) E. W. Vansittart, Captain.

(signed) John M'Kie, Chief Engineer.

"ACHILLES."—REPORT of TRIALS, 4th, 5th, and 6th September 1867.

(General Form No. 2.)

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure of Indicated Diagrams per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Achilles	1867: 4 Sept.	12 to 1 p.m.	24	20	28 $\frac{1}{2}$	13.32	2037.96	3.34	6,812	2,182	8.0	Engines working expansively, cutting off at $\frac{1}{2}$. Ditto - - ditto.
		1 to 2 "	"		"	-	-	-	5,720	2,108	7.8	
		2 to 3 "	"		"	-	-	-	5,460	2,130	7.8	
		3 to 4 "	28		"	12.6	1849.54	2.95	1,560	795	4.0	
		4 to 5 "	"		"	-	-	-	1,584	16	1.5	
		5 to 6 "	"		"	-	-	-	6,008	773	3.3	
		6 to 7 "	"		"	-	-	-	7,948	2,280	7.5	
		7 to 8 "	"		"	12.8	1879.36	4.25	7,992	2,136	7.5	
		8 to 9 "	"		"	-	-	-	7,252	2,030	7.0	
		9 to 10 "	"		"	-	-	-	4,978	1,982	6.5	
Ditto	5 Sept.	10 to 11 "	"	20	"	-	-	-	4,192	2,058	6.8	Disconnected screw at 9.45 a.m. Connected screw at 1.30 p.m.
		11 to 12 "	"		28	11.9	1672.80	3.40	5,800	2,050	7.0	
		12 to 1 a.m.	"		"	-	-	-	7,252	2,332	7.5	
		1 to 2 "	"		"	-	-	-	7,540	2,056	7.5	
		2 to 3 "	"		"	-	-	-	7,336	2,120	7.5	
		3 to 4 "	"		"	13.32	2019.90	4.31	8,772	2,206	7.5	
		4 to 5 "	"		"	-	-	-	7,770	2,253	7.5	
		5 to 6 "	"		28 $\frac{1}{2}$	-	-	-	8,360	2,181	7.7	
		6 to 7 "	"		"	-	-	-	5,352	1,175	2.0	
		7 to 8 "	"		"	12.6	1849.54	4.21	7,770	2,137	7.8	
Ditto	6 Sept.	8 to 9 "	"	20	"	-	-	-	3,240	1,950	6.0	Coals very small, engines working expansively, cutting off at $\frac{1}{2}$.
		9 to 10 "	"		"	-	-	-	780	691	6.0	
		2 to 3 p.m.	24		"	-	-	-	4,160	1,114	8.8	
		3 to 4 "	"		"	7.5	806.52	5.10	4,128	1,577	8.8	
		4 to 5 "	"		"	-	-	-	5,180	2,075	8.0	
		5 to 6 "	"		"	-	-	-	4,855	1,463	6.0	
		6 to 7 "	"		"	-	-	-	5,425	1,947	7.5	
		7 to 8 "	"		"	11.8	1512.80	3.53	5,355	1,849	7.8	
		8 to 9 "	"		"	-	-	-	5,610	2,006	8.0	
		9 to 10 "	"		"	-	-	-	4,644	1,756	8.0	
Ditto	6 Sept.	10 to 11 "	"	24	20	28 $\frac{1}{2}$	1797.26	3.34	3,072	1,466	7.5	
		11 to 12 "	"						4,427	1,458	7.5	
		12 to 1 p.m.	"						2,590	1,578	7.0	
		1 to 2 "	"						4,080	1,619	7.0	
		2 to 3 "	"						4,626	1,710	7.0	
		3 to 4 "	"			10.37	1243.52	3.87	4,826	1,400	7.2	
		4 to 5 "	"			-	-	-	5,180	1,552	7.2	
		5 to 6 "	"			-	-	-	4,716	1,094	6.8	
		6 to 7 "	"			-	-	-	4,536	1,665	8.0	
		7 to 8 "	"			11.91	1797.26	3.34	6,003	2,189	8.0	
Ditto	6 Sept.	8 to 9 "	"	24	20	28 $\frac{1}{2}$	1797.26	3.34	4,386	1,943	8.0	
		9 to 10 "	"						4,193	2,234	6.0	

Approved.

(signed)

E. W. Vansittart, Captain.

(signed)

John M'Kie,

Chief Engineer.

"ACHILLES."—REPORT of TRIAL, 23rd August 1867.

(General Form, No. 3.)

Name of Ship.	Date.	Maximum Amount of Horse Power developed at the Measured Mile, under favourable circumstances of every kind.	Deduct 10 per Cent. of expected Amount of Horse Power to be developed at Sea under ordinary circumstances.	Length of Trial.	Speed.	Indicated Horse Power.	Number of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, whether Ahead, Abeam, or on Quarter.	Degrees of Rolling.	
											Force.	Direction.		Maximum.	Minimum.
Achilles -	1867 : 23 Aug.	28 Dec. 1864 - 5,746	5171.4	8.20 to 9.20	12.5	5667.82	53	18,270	12.5	E. $\frac{1}{2}$ S.	2 to 3	N. N. W.	Long swell on star-board quarter - ditto	4	0.5
		15 Mar. 1865 - 5,787	5208.7	9.20 to 10.20	12.5	5533.36	52	18,270	12.5	"	"	"		3.5	0.5
		31 July 1866 - 5,790	5211.0	10.20 to 11.10	12.5	5570.72	52 $\frac{1}{2}$	15,670	12.5	"	"	"		3	0.0
Mean - - -		5774.3	5197.0	-	-	5590.63	52 $\frac{1}{2}$	18,448							

Approved. (signed) E. W. Vansittart, Captain.

(signed) John M'Kie, Chief Engineer.

Enclosure 4.

"LORD CLYDE."—REPORT of TRIAL at Fixed Speeds, 12th and 23rd August 1867,

Name of Ship.	Date.	Length of Trial.	Speed.	Indicated Horse Power.	Number of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Courses Steered.	Wind.		State of Sea, and whether Ahead, Abeam, or Quarter.	Degrees of Rolling.		REMARKS.
									Force.	Direction.		Maximum.	Minimum.	
Lord Clyde	1867 : 12 Aug.	Hours. 10	Knots. 5	409.93	25.23	1,568	3.86	W. $\frac{1}{2}$ S. 50 miles.	2 to 3	E. N. E.	Very moderate ahead.	3	0	
	23 Aug.	8	7	921.7	34.2	2,688	2.9	E. $\frac{1}{2}$ S. 33 miles.	2 to 5	N. N. E.	Port quarter, moderate.	5	2	

Approved. (signed) R. Dew, Captain.

(signed) William Gill, Chief Engineer.

"LORD CLYDE."—REPORT of TRIAL at Full Speed, 23rd August 1867.

Name of Ship.	Date.	Maximum of Horse Power developed at the Measured Mile under favourable circumstances of every kind.	Deduct 10 per Cent. of expected Amount of Horse Power to be developed at Sea under ordinary circumstances.	Length of Trial.	Speed.	Indicated Horse Power.	Number of Revolutions per Minute.	Consumption of Coal per Hour in Lbs.	Rate in Lbs. per Hour per Indicated Horse Power.	Course.	Wind.		State of Sea, and whether Ahead, Abeam, or on Quarter.	Degrees of Rolling.		REMARKS.
											Force.	Direction.		Maximum.	Minimum.	
Lord Clyde	1867 : 23 Aug.	6,064	5,458	Hr. Min. 2 40	12.3	3771.1	58.7	14,336	3.42	E. $\frac{1}{2}$ S.	2	N. N. E.	Moderate swell on port quarter.	5	2	

Approved. (signed) R. Dew, Captain.

(signed) W. Gill, Chief Engineer.

"LORD CLYDE."—REPORT of TRIAL at Five Knots' Speed, 12th August 1867.

Name of Ship.	Date.	Length of Trial.	Number of Fires Used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicator Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals Used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Lord Clyde	1867 : 12 Aug.	7 a.m.	16	10	Fore	Aft.		Lbs.	Cwt.			The consumption per indicated Horse Power on this trial is greater than usual, the coal running very small during the first six hours.
		8 "	12	11	26 $\frac{1}{2}$	28	2.6475	350.	4.80	15	1,550	
		9 "	12	11	26 $\frac{1}{2}$	28	2.84	334.7	4.85	13	1,380	
		10 "	12	12	26 $\frac{1}{2}$	27 $\frac{1}{2}$	3.26	415.87	4.04	15	1,494	
		11 "	12	14	26	27 $\frac{1}{2}$	3.35	450.6	3.97	16	1,576	
		12 "	12	12	26	27 $\frac{1}{2}$	3.527	497.	3.60	16	1,652	
		1 p.m.	12	11	26	27	3.15	389.	3.74	13	1,441	
		2 "	12	16	26 $\frac{1}{2}$	26 $\frac{1}{2}$	3.15	411.53	4.08	15	1,532	
		3 "	12	11	26	26	3.49	454.13	3.20	13	1,526	
		4 "	12	11 $\frac{1}{2}$	26	26 $\frac{1}{2}$	3.51	453.22	2.96	12	1,512	
		5 "	12	11	25 $\frac{1}{2}$	26 $\frac{1}{2}$	2.735	343.3	3.91	12	1,474	
		Total - - -		120 $\frac{1}{2}$	261 $\frac{1}{2}$	271	31.66	4099.35	38.65	140	15,137	
		Mean - - -		12.05	26.1	27.1	3.166	409.93	3.86	14.	1513.7	

Approved. (signed) R. Dew, Captain.

(signed) William Gill, Chief Engineer.

"LORD CLYDE."—REPORT of TRIAL at Seven Knots' Speed, 23rd August 1867.

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicator Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.
Lord Clyde -	1867 : 23 Aug.	<i>Hour.</i>	<i>No.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Lbs.</i>	<i>No.</i>	<i>Lbs.</i>	<i>Tons. Cwt.</i>	<i>No.</i>	<i>Knots.</i>
		12 a.m.	16	16	25½	25½	-	-	-	-	-
		1 p.m.	16	16	26	27½	5·7	1019·3	2·63	1 4	2,097 7
		2 "	16	16	27	27	5·368	974·	3·67	1 12	2,125 7
		3 "	16	13	26	27	5·475	984·7	2·72	1 4	2,103 7
		4 "	16	12	26½	27	5·29	905·3	2·36	1 4	2,006 7
		5 "	16	12	27	27	4·80	811·4	2·76	1 0	1,981 7
		6 "	16	11	26	27	4·95	837·	2·67	1 0	1,980 7
		7 "	16	15	24	25½	5·48	932·2	1 4	1,992 7	7
		8 "	16	17	26	27½	5·03	909·8	2·95	1 4	2,118 7
		Mean	- - -	14·2	26	26·7	5·261	921·7	2·9	1 4	2,051 7

Approved. (signed) *R. Dew,*
Captain.

(signed) *William Gill,*
Chief Engineer.

"LORD CLYDE."—REPORT of TRIAL at Full Speed, 23rd August 1867.

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicator Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.	REMARKS.
Lord Clyde -	1867 : 23 Aug.	<i>Hour.</i>	<i>No.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Lbs.</i>	<i>No.</i>	<i>Lbs.</i>	<i>Tons. Cwt.</i>	<i>No.</i>	<i>Knots.</i>	Shortly after commencing this trial, the lever of counter carried away, but was repaired and set to work again before 10 a.m. From this cause only one hour's revolutions by counter can be given.
		8. 20 a.m.	32	16	26½	26	-	-	-	-	-	
		9 "	32	21	25	25	11·95	3367·7	3·05	4 12	-	
		10 "	32	21	26	26½	12·7	3813·4	3·75	6 8	12·3	
		11 "	32	21	26½	27	13·6	4132·4	3·46	6 8	12·3	
		Mean	- - -	19·75	26	26·1	12·75	3771·2	3·42	5 16	-	

Approved. (signed) *R. Dew,*
Captain.

(signed) *William Gill,*
Chief Engineer.

"LORD CLYDE."—REPORT of TRIAL, 2nd September 1867.

Name of Ship.	Date.	Length of Trial.	Number of Fires used.	Mean Height of Steam Gauge during the Hour.	Mean Height of Barometer Gauge during the Hour.	Mean Pressure by Indicator Diagram per Hour.	Mean Indicated Horse Power per Hour.	Coals used per Indicated Horse Power per Hour.	Total Quantity of Coals used per Hour.	Revolutions per Hour by Counter.	Speed of Ship in Knots per Hour.
Lord Clyde -	1867 : 2 Sept.	<i>Hour.</i>	<i>No.</i>	<i>Inches.</i>	<i>Inches.</i>	<i>Lbs.</i>	<i>No.</i>	<i>Lbs.</i>	<i>Tons. Cwt.</i>	<i>No.</i>	<i>No.</i>
		8.30 a.m.	16	16	26½	28	-	-	-	-	-
		9.30 "	16	15½	25½	27½	8·6	1714·	1·96	1 10	2,338 9
		10.30 "	16	15½	25½	27½	6·2	1194·5	2·43	1 6	2,261 9
		11.30 "	16	17	26	27½	6·0	1183·6	2·65	1 8	2,314 9
		12.30 "	16	16½	26	27	6·32	1282·3	2·62	1 10	2,375 9
		1.30 "	16	17	26	27	6·6	1346·	2·33	1 10	2,391 9·1
		2.0 "	16	16	26	27	7·89	1697·9	2·11	0 16	1,260 9·4
		Mean	- - -	16½	26	27½	6·93	1403·	2·35	1 9	2,352·5

(signed) *A. Kennedy,* Commanding Officer
(Captain on Duty).

(signed) *William Gill,*
Chief Engineer.

" LORD CLYDE."

RETURN of the Number of REVOLUTIONS made by the ENGINES, and of COAL Consumed on the Voyage from *Plymouth* to *Bantry Bay*.

For laying Fires - - - 3 Tons, 4 Cwt.

Date.	Hours.	Revolutions per Hour.	Coal Consumed per Hour.	REMARKS.
1867:				
September 4	11 a.m.	-	<i>Tons. Cwt.</i> 1 2	Coals for raising steam at 9.45 a.m., 3 tons 4 cwt.
	12 "	-	1 6	
	1 p.m.	-	2 2	
	2 "	-	2 2	
	3 "	-	2 1	
	4 "	-	0 18	
	5 "	-	0 8	Coals for raising steam in two boilers, 1 ton 17 cwt.
	6 "	-	1 18	
	7 "	-	2 18	
	8 "	-	4 0	
	9 "	-	3 8	
	10 "	-	3 17	
	11 "	-	3 18	
	12 "	-	3 18	
		30,490	33 16	
September 5	1 a.m.	-	3 14	At 9.20 stopped engines, disconnected screws, and drew fires in after stoke- hole. At 2.15 connected screws, and proceeded. Coals used for lay- ing fires, 3 tons 4 cwt.; and for raising steam, 4 tons.
	2 "	-	3 14	
	3 "	-	3 15	
	4 "	-	3 16	
	5 "	-	3 18	
	6 "	-	2 0	
	7 "	-	2 16	
	8 "	-	3 14	
	9 "	-	3 10	
	10 "	-	0 8	
	3 p.m.	-	0 16	
	4 "	-	1 18	
	5 "	-	3 2	
	6 "	-	2 18	
	7 "	-	2 18	
	8 "	-	3 15	
	9 "	-	3 2	
	10 "	-	2 18	
	11 "	-	2 15	
	12 "	-	1 18	
		49,289	57 5	
September 6	1 a.m.	-	2 4	
	2 "	-	2 6	
	3 "	-	2 10	
	4 "	-	2 8	
	5 "	-	3 4	
	6 "	-	2 16	
	7 "	-	3 4	
	8 "	-	2 0	
	9 "	-	1 4	
	10 "	-	nil.	
		23,480	21 16	

TOTAL Consumption of COAL:				<i>Tons. Cwt.</i>
September - 4	For laying Fires	-	-	3 4
	Raising Steam	-	-	3 4
	When Steaming	-	-	1 17
September - 5	Laying Fires	-	-	33 16
	Raising Steam	-	-	3 4
	When Steaming	-	-	4 0
September - 6	When Steaming	-	-	57 5
	When Steaming	-	-	21 16
				128 6

Total Number of Revolutions - - - 103,209.

(signed) A. Kennedy, Commander
(Captain on Duty.)

(signed) William Gill, Chief Engineer.

Enclosure 5.

TABLE showing Mean Results obtained at FIVE KNOTS' SPEED from the under-mentioned SHIPS on
12th August 1867.

Name of Ship.	Length of Trial.	Mean Pressure.	Indicated Horse Power.	Coals per Indicated Horse Power.	Total Coals per Hour.	Revolutions per Minute.	REMARKS.
	<i>Hours.</i>			<i>Lbs.</i>	<i>Lbs.</i>		
Minotaur - -	10	4'99	551'5	3'54	1,932	24'56	
Achilles - -	"	4'97	453'9	3'93	1,787	21'95	
Lord Clyde - -	"	3'166	409'93	3'86	1,568	25'2	
Bellerophon - -	"	5'30	653'81	2'20	1,400	29'8	

(signed) John Saunders, Chief Engineer,
H.M.S. "Minotaur."

Enclosure 6.

TABLE showing Mean Results obtained at SEVEN KNOTS' SPEED from the under-mentioned SHIPS on
23rd August 1867.

Name of Ship.	Length of Trial.	Mean Pressure.	Indicated Horse Power.	Coals per Indicated Horse Power per Hour.	Total Coals used per Hour.	Revolutions per Minute.	REMARKS.
	<i>Hours.</i>			<i>Lbs.</i>	<i>Lbs.</i>		
Minotaur - -	8	9'08	1389'4	3'94	5,495	34'	
Achilles - -	"	7'39	962'8	3'87	3,737	31'5	
Lord Clyde - -	"	5'261	921'7	2'9	2,688	34'1	
Bellerophon - -	"	6'586	1244'	3'51	4,354	40'06	

(signed) John Saunders, Chief Engineer,
H.M.S. "Minotaur."

Enclosure 7.

TABLE showing Mean Results obtained at a FULL SPEED TRIAL from the under-mentioned SHIPS on
23rd August 1867.

Name of Ship.	Length of Trial.	Mean Pressure.	Indicated Horse Power.	Coals per Indicated Horse Power per Hour.	Total Coals used per Hour.	Revolutions per Minute.	REMARKS.
	<i>Hrs. Min.</i>			<i>Lbs.</i>	<i>Lbs.</i>		
Minotaur - -	2 40	24'08	5937'4	3'28	19,540	56'	Maximum speed, full power, 12 knots.
Achilles - -	"	25'78	5590'63	3'29	18,448	52'5	Maximum speed, full power, 12'5 knots.
Lord Clyde - -	"	12'75	3771'2	3'42	12,992	58'2	Maximum speed, full power, 12'3 knots.
Bellerophon - -	"	16'68	4579'6	3'16	13,290	65'1	Maximum speed, full power, 11'8 knots.

(signed) John Saunders, Chief Engineer,
H.M.S. "Minotaur."

Enclosure 8.

ABSTRACT of Return of Rolling of Ships, 20th August 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll. *	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate, on beam and bow -	Minotaur - - -	Sail only; 6 to 7 points from wind	P. 4'8	7'0
Heavy, on beam and bow -	Bellerophon - -	Sail only; 4 to 6½ points from wind - - -	{ C. 6'8 P. 6'8	6'8 7'0
Considerable and long, two points before beam.	Achilles - - -	Sail only; 7 points from wind -	{ C. 6'3 P. 5'8 B. 4'5	4'5 5'5 7'0
Considerable, one point before beam.	Lord Clyde - -	Sail only; 7 points from wind -	{ C. 10'40 P. 12'35	10'03 10'40

ABSTRACT of Return of Rolling of Ships, 23rd August 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
Very moderate on quarter -	Minotaur - - -	Steam only; wind (force 2) quarterly.	<i>Degrees.</i> P. 3°50	<i>No.</i> 2°25
Slight swell on bow - -	Bellerophon - - -	Steam only; wind (force 2) quarterly - - - - -	{ C. 4°00 P. 4°00	3°00 3°00
Long on quarter - - -	Achilles - - -	Steam only; wind (force 2) quarterly - - - - -	{ C. 3°20 P. 4°00 B. 4°45	4°00 5°00 6°25
Moderate on quarter - -	Lord Clyde - - -	Steam only; wind (force 2) quarterly.	P. 6°75	(not ascertained.)

ABSTRACT of Return of Rolling of Ships, 4th September 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
Moderate on weather beam and bow.	Bellerophon - -	Steam only; 2 points from wind	<i>Degrees.</i> { C. 5°60 P. 6°60	<i>No.</i> 6°00 6°00
Long on bow - - -	Lord Clyde - -	Steam only; head to swell -	(so small as not to be appreciable.)	

ABSTRACT of Return of Rolling of Ships, 5th September 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
Heavy on weather bow -	Bellerophon - -	Sail only; 5 points from wind -	<i>Degrees.</i> { C. 7°60 P. 8°00	<i>No.</i> 7°00 7°00
Heavy on bow - - -	Lord Clyde - -	Sail only; 7 points from wind -	{ C. 12°35 P. 11°00	10°00 10°00
Heavy on weather bow -	Bellerophon - -	Steam and sail; 2 to 5 points from wind - - - - -	{ C. 8°92 P. 9°10	7°57 7°57
Heavy on bow - - -	Lord Clyde - -	Steam and sail; 8 to 10 points from wind - - - - -	{ C. 9°87 P. 9°00	10°00 10°00

ABSTRACT of Return of Rolling of Ships, 6th September 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
Heavy on weather beam -	Bellerophon - - -	Steam and sail; 5 to 9 points from wind.	<i>Degrees.</i> { C. 27°00 P. 27°00	<i>No.</i> 7°66 8°00
Considerable on beam and abaft beam.	Lord Clyde - - -	Steam only; 9 to 11 points from wind.	{ C. 51°25 P. 45°25	10°00 10°00

* C. By Clinometer.

P. By Pendulum.

B. By Bar Instrument.

"ACHILLES."

Mean Rolling Motion, ascertained from Five Minute Observations
by each Instrument.

When Ship is under Sail,
and not Rolling to Windward of Perpendicular,
Mean Heel ascertained
by Five Minute Observations of each Instrument.

[illegible]

"ACHILLES."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "ACHILLES."

Pitching, when ascertained.			Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.			Course.			Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.		
Forward.		Aft.	Under Steam only.		Under Steam and Sull.	Under Sull only.																								
Degrees.	N.	T.																												
11	11	11	11	Yes	No	No	Yes - -	- -	Nil - -	- -	S.E.	N.N.W.	3 to 4	Moderate -	-	Port quarter	-	Aloft	-	Square	-	All	-	All	-	All	-	All	-	Steaming round target.
"	"	8	8	No	"	Yes	Revolving -	-	Two reefs in topsail, fore trysail and jib.	-	S. 1/4 E.	W.S.W.	6 to 7	Long swell	-	Starboard beam	-	Royal yards on deck.	-	Braced up -	-	"	-	"	-	"	-	"	-	Close hauled on starboard tack.
"	"	1	1	"	"	"	Not revol-ving.	-	Double reefed topsail, top-mast staysail and jib.	-	S.W. by S.	W.N.W.	6 to 7	Considerable, long	-	Two points before beam.	-	- ditto -	-	- ditto -	-	"	-	"	-	"	-	"	-	Carrying two to two-and-a half turns of weather helm.
"	"	2	2	"	"	"	Not revol-ving.	-	- ditto -	-	S.W. by S.	N.N.W.	5 to 6	Considerable, long	-	- ditto -	-	- ditto -	-	- ditto -	-	"	-	"	-	"	-	"	-	"
"	"	12	5	Yes	"	No	Connected -	-	- None -	-	E. 1/4 S.	W.	2	Long	-	Starboard quarter	-	- ditto -	-	- No -	-	"	-	"	-	"	-	"	-	During trial, steaming full power.
"	"	12	5	"	"	"	Connected -	-	- ditto -	-	E. 1/4 S.	W.	2	Long	-	- ditto -	-	- ditto -	-	- ditto -	-	"	-	"	-	"	-	"	-	- ditto.
1-6	"	4	3	No	No	Yes	Yes - -	-	Double-reefed topsails, fore trysail, jib, and top stay-sail.	-	S.W.	N.W. by N.N.W.	5 to 6	Long, heavy	-	A little abaft the starboard beam.	-	Royal yards in tops.	-	- No -	-	All	-	All	-	All	-	All	-	
"	"	7	-	No	No	Yes	Yes - -	-	- ditto -	-	S.W.	N.N.W.	6 to 7	- ditto -	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
0-2	"	7	-	No	No	Yes	Yes - -	-	Double-reefed topsails, fore trysail, jib, and top stay-sail, with topgallant sails.	-	S.W.	N.N.W.	5 to 7	- ditto -	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	6	-	"	"	"	" - -	-	- ditto -	-	"	"	"	- ditto -	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	6	-	"	"	"	" - -	-	- ditto -	-	"	"	"	- ditto -	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	6	-	"	"	"	" - -	-	- ditto -	-	"	"	"	- ditto -	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	6	-	"	"	"	" - -	-	- ditto -	-	"	"	5 to 6	Long	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	5	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	5	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	4	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	3	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	2	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	2	-	"	"	"	Connected -	-	Top, fore, jib, and staysail	-	"	"	2 to 3	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	1	-	"	"	"	" - -	-	- ditto -	-	W.	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
2	"	1	-	"	"	"	" - -	-	- ditto -	-	N.W.W.	N.E.	"	ditto	-	A little abaft starboard bow	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1	"	1	-	"	"	"	" - -	-	- ditto -	-	S.S.W.	N.E.	"	ditto	-	A little on port bow	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1-5	"	1	-	"	"	"	" - -	-	- ditto -	-	S.S.W.	N.E.	2 to 3	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1-5	"	1	-	"	"	"	" - -	-	- ditto -	-	W.S.W.	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
1-5	"	1	-	"	"	"	" - -	-	- ditto -	-	N.W. 1/4 W.	"	"	Swell moderate -	-	Ahead -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	1	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	1	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	Topsails, topgallant sails, foresail, and jib.	-	W.	"	"	ditto	-	- On starboard	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	Yes	No	"	" - -	-	- ditto -	-	N.S.W.	"	"	ditto	-	- On starboard	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto -	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	All plain sail, port stud-ding-sails (except lower).	-	S.W.W.	E	"	ditto	-	- On starboard	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	Moderate -	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-	"	-	"	-	"	-	"	-	
"	"	8	-	"	"	"	" - -	-	- ditto -	-	"	"	"	ditto	-	- ditto	-	- " -	-	- " -	-									

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

DATE.	On Board.				Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minutes Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Provisions.				Stores.	Coals.		Forward.	Aft.	Clinometer.					Pendulum.				Batten Instrument.				Clinometer.			Pendulum.			Batten Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
										Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
													Degrees.					Oscillations per Minute.					Degrees.					Oscillations per Minute.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
12 Oct. 1867	-	Bread - 57 Dry provisions, 98 Salt " - 63	6	620	26	1	26 11	H.	M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

TRIALS OF THE CHANNEL FLEET IN 1867.

ACHILLES.—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

Attilas. — Returns of Rolling and Performance at Sea of Her Majesty's Ship "Achilles" — continued.															Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Tide.		Weather.			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.	Course.	Wind.		Sea or Swell.	State of Yards.		Weather.	Lee.	Weather.	Lee.			
Forward.	Aft.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Direction.	Force.			Nature; i. e. whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.		If Upper are Aloft.	If Yards are Braced up.							
Drift.	Wind.																			
1	1	2	2	No	No	Yes	Disconnected	All plain sail (except royals).	S. W. by S.	East	2 to 3	Very moderate	On port quarter	Yes	No	All	All	All	All	
2	2	3	3	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
3	3	4	4	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
4	4	5	5	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
5	5	6	6	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
6	6	7	7	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
7	7	8	8	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
8	8	9	9	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
9	9	10	10	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
10	10	11	11	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
11	11	12	12	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
12	12	13	13	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
13	13	14	14	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
14	14	15	15	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
15	15	16	16	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
16	16	17	17	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
17	17	18	18	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
18	18	19	19	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
19	19	20	20	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
20	20	21	21	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
21	21	22	22	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
22	22	23	23	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
23	23	24	24	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
24	24	25	25	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
25	25	26	26	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
26	26	27	27	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
27	27	28	28	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
28	28	29	29	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
29	29	30	30	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
30	30	31	31	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
31	31	32	32	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
32	32	33	33	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
33	33	34	34	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
34	34	35	35	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
35	35	36	36	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
36	36	37	37	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
37	37	38	38	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
38	38	39	39	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
39	39	40	40	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
40	40	41	41	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
41	41	42	42	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
42	42	43	43	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
43	43	44	44	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
44	44	45	45	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
45	45	46	46	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
46	46	47	47	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
47	47	48	48	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
48	48	49	49	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
49	49	50	50	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
50	50	51	51	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
51	51	52	52	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
52	52	53	53	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
53	53	54	54	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
54	54	55	55	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
55	55	56	56	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
56	56	57	57	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
57	57	58	58	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
58	58	59	59	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
59	59	60	60	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
60	60	61	61	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
61	61	62	62	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
62	62	63	63	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
63	63	64	64	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
64	64	65	65	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
65	65	66	66	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
66	66	67	67	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
67	67	68	68	No	No	Yes	Disconnected	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
68	68																			

REPORT, &c. RELATIVE TO

“ACHILLES.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Achilles”—*continued.*

[illegible]

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
Forward.	Aft.	E.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.						Direction.	Force.	Nature; i. e. whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
Degrees.																											
1	-	4	-	No	Yes	No	Connected	-	-	Fore and aft sails	-	S.W. by S.	W. by S.	2	Long	-	Starboard quarter	-	Yes	-	Yes	-	All	All	All	All	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	Yes	No	"	"	"	"	None	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-	4	-	"	"	"	"	"	"	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	-</																										

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
Degrees.	Degrees.																				
-	-	1	8	-	-	Yes	Connected	-	Topsails and headsails	N.	E. by N.	2	Moderate	Starboard bow	Yes	No	All	All	All	All.	
-	-	1	5	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	5	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	5	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	5	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	2	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	8	-	-	"	"	-	ditto	"	E.N.E.	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	8	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	4	-	-	"	"	-	All plain and trysails	N. by W.	N.E. by E.	"	ditto	ditto	"	Yes	"	"	"	"	
-	-	1	4	-	-	"	"	-	ditto	N. $\frac{1}{2}$ W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	4	-	-	"	"	-	ditto	N.W. by N.	N.E.	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	-	-	-	"	Connected, not revolving.	-	ditto	N.W. by N.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	-	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	1	-	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	8	-	-	"	"	-	Topsails, foresail, fore trysail, jib and fore top staysail.	N.W. by N.	"	"	ditto	ditto	"	No	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	N.N.W. $\frac{1}{2}$ W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	Topsails, foresail, fore trysail, jib and fore top staysail, with main trysail.	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	1	-	-	"	"	-	ditto	N.N.W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	1	-	-	"	"	-	Topsails, foresail, fore trysail, jib and fore top staysail, with mainsail.	N.N.W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	N. by W. $\frac{1}{2}$ W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	N.N.W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	N.N.W. $\frac{1}{2}$ W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	Topsails, jib, fore top stay-sail, and fore trysail.	N.N.W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	-	-	-	Yes	Connected, not revolving.	-	Topsails, jib, fore staysail, and fore trysail.	N.N.W. $\frac{1}{2}$ W.	N.E.	2	Moderate	Starboard bow	Yes	No	All	All	All	All.	
-	-	2	2	-	-	"	"	-	ditto	N.N.W. $\frac{3}{4}$ W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	8	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	N.N.W. $\frac{1}{2}$ W.	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	5	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	2	2	-	-	"	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
1	1	2	-	Yes	-	-	Connected and revolving.	-	None	N.N.W. $\frac{1}{2}$ W.	E.N.E.	1	Very long	Starboard beam	Yes	No	All	All	All	All.	
1.5	1.5	5	-	"	-	-	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
1	1	5	-	"	-	-	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
1	1	5	-	"	-	-	"	-	ditto	"	"	"	ditto	Port quarter	"	"	"	"	"	"	
1	1	5	-	"	-	-	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
1	1	5	-	"	-	-	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
1	1	5	-	"	-	-	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	
-	-	-	-	Yes	-	-	Connected and revolving.	-	None	Steaming round target.	E.N.E.	1	Moderate	Port quarter	Yes	No	All	All	All	All.	
-	-	-	-	"	-	-	"	-	ditto	"	"	"	ditto	ditto	"	"	"	"	"	"	

(Approved)

Robt. L. Cleveland, Staff Commander.
E. W. Vansittart, Captain.

"BELLEROPHON."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "BELLEROPHON."

DATE.	On Board.				Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Provisions.			Stores.	Coals.	Forward.		Aft.	Clinometer.					Mean Number of Oscillations per Minute.	Pendulum.				Oscillations per Minute.	Bar Instrument.			Clinometer.			Pendulum.			Bar Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
									Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Degrees.					Degrees.								Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</

No motion perceptible

"BELLEROPHON."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "BELLEROPHON."

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.			Direction.	Force.		Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.				
1	1	3	2	-	-	Sail	Fixed	-	Double-reefed topsails and courses.	S.S.W.	W.S.W.	7	Heavy	-	On weather beam	Topgallant	-	Yes	-	All in battery	All	All	All.
2	1	3	-	-	-	-	-	-	ditto	-	-	-	ditto	-	-	ditto.	-	-	-	-	-	-	-
3	1	2	8	-	-	-	-	-	ditto	S.S.W.	W.S.W.	6	ditto.	-	-	-	-	-	-	-	-	-	-
4	1	3	-	-	-	-	-	-	ditto	-	-	-	ditto.	-	-	-	-	-	-	-	-	-	-
5	1	2	5	-	-	-	-	-	ditto	S.W.	W.N.W.	6	ditto.	-	-	-	-	-	-	-	-	-	-
6	1	2	5	-	-	-	-	-	ditto	-	-	-	ditto.	-	-	-	-	-	-	-	-	-	-
7	1	3	2	-	-	-	-	-	Double reefed topsails, courses, and top-gallant sails.	S.W. ½ S.	W.N.W.	6	ditto.	-	-	-	-	-	-	-	-	-	-
8	1	3	-	-	-	-	-	-	ditto	-	-	-	ditto.	-	-	-	-	-	-	-	-	-	-
9	1	2	-	-	-	-	-	-	ditto	-	-	-	ditto	-	-	-	-	-	-	-	-	-	-
10	1	1	4	-	-	-	-	-	ditto	N. ¼ E.	W.N.W.	4	ditto.	-	Weather bow.	-	-	-	-	-	-	-	-
11	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	11	8	Yes	-	-	-	-	None	E.	W.N.W.	2	Slight westerly swell.	Bow	-	Topgallant	Square	-	All	All	All	All.	
13	-	11	8	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	All	All	All	All.	
14	-	9	-	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	7	-	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	7	-	-	-	-	-	-	-	-	-	-	None.	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</	

Year	1990	1991	1992	1993	1994
1990	1990	1991	1992	1993	1994

[illegible]

R. W. J. Macdonald, Captain.

"LORD CLYDE."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "LORD CLYDE."

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.										When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																		
							Clinometer.				Pendulum.				Bar Instrument.		Clinometer.			Pendulum.			Bar Instrument.												
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.					
																															Degrees.		Degrees.		Degrees.
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H.	M.	This instrument showed as much as 35 degrees maximum, not indicating truly.											Main trysail sheet hauled aft, and in the way of fixing this in- strument, which at best is imper- fect.																	
♂ 20 August 1867 -	76	5	418	23 0	27 0	10	0 a.m.	7	14	21	18	11	10	13	23	16	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						11	0 "	6	12	18	13	11	8	11	19	15	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						Noon	6	12	18	13	11	5	11	16	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						1	0 p.m.	3	10	13	11	10	3½	6	9½	7½	11	Main trysail sheet hauled aft, and in the way of fixing this in- strument, which at best is imper- fect.						-	-	-	-	-	-	-	-	-	-	-	-
						2	0 "	2	6½	8½	8	11	6	7	13	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						3	0 "	3	7½	10½	12	10	4	7	11	9	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4	0 "	2	8½	10½	13	10	3½	7	10½	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5	0 "	1	2½	3½	4	10	2½	5½	8	7½	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
♀ 23 August 1867 -	73	5	360	22 5	26 10	9	0 a.m.	-	-	-	-	-	3	4½	7½	5	Could not be ascer- tained. ditto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						10	0 "	-	-	-	-	-	3	3	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						4	0 p.m.	1	2	3	3	10	3	1	4	3½	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						5	0 "	2	4	6	5	10	4½	3	7½	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						8	0 a.m.	7	5½	12½	7	10	6½	4	10½	7	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						9	0 "	8	5	13	14	10	7	1½	8½	7½	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						10	0 "	10	8	18	21	10	12	7	19	15	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11	0 "	8	6	14	9	10	9	5	14	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4 September 1867	61	5	279	21 8	26 11	Noon	5½	2½	8	8½	10	5	3	8	5½	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						1	0 p.m.	5	3	8	8	10	6	1	7	7	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						2	0 "	6	7	13	21	10	6	4	10	7	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						3	0 "	5	4	9	28	10	2	7	9	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						4	0 "	6	3	9	7	10	7	1½	8½	8	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						5	0 "	6	5	11	8	10	5½	1½	7	6	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						6	0 "	5½	5	10½	8	10	8	3½	11½	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						7	0 a.m.	26	21½	47½	28	10	22	21	43	23	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
♂ 8 October 1867	92	2	488	23 6	27 2	8	0 "	26	29	55	30	10	23	24½	47½	27	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						Every hour be- tween 8 a.m. and 5 p.m.						Batten Instrument.					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						9	10	19	18	10	9	10	19	15	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						-	ditto	-	9	12	21	21	11	10	11½	21½	20	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	ditto	-	10	13	23	22	11	8½	13	21½	20	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	ditto	-	4½	2½	7	9	10	4	2½	6½	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	ditto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						-	ditto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
♀ 11 October 1867	89	2	450	23 2	27 2	-	ditto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

"LORD CLYDE."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "LORD CLYDE."

Pitching, when ascertained.		Speed.		Whether			Whether with		SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	or Disconnected and Revolving.	Direction.			Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.		
-	-	2	8	-	-	Yes	Fixed	-	Third-reefed topsails, fore-top staysail, foresail, and main trysail.	S.S.W.	W. by N.	7 & 6	Heavy, long swell	One point before beam.	Topgallant yards across.	- Yes -	None without risk	None	None	When the roll of the ship was at 16 degrees, the clinometer fell over with the lurch, indicating, far beyond a reasonable result, the delicate mechanism of the instrument is not strong enough to control the swing of its pendulum after being some time in use.	
-	-	3	-	-	-	"	"	-	ditto	"	"	6 to 5	Considerable	- ditto -	"	"	- ditto -	"	"		
-	-	3	-	-	-	"	"	-	Double-reefed topsails; other sail as above.	"	"	"	Considerable, but decreasing.	- ditto -	"	"	- ditto -	"	"		
-	-	2	-	-	-	"	"	-	ditto	"	"	5	ditto	- ditto -	"	"	- Probably all -	Upper deck, and probably all on main deck.			
-	-	2	-	-	-	"	"	-	ditto	"	"	4	ditto	- ditto -	"	"	- ditto -	ditto.			
-	-	2	-	-	-	"	"	-	ditto	"	"	3	Moderate	- ditto -	"	"	- ditto -	ditto.			
-	-	2	-	-	-	"	"	-	Single-reefed topsails and topgallant sails; other sail as above.	"	"	3	ditto	- ditto -	"	"	All	All	All	All.	
-	-	2	-	-	-	"	"	-	ditto	"	"	3	ditto	- ditto -	"	"	"	"	"	Owing to the great vibration, no satisfactory results could be obtained; but the swell decreasing, there was hardly anything observable after 11 a.m. on the 23rd, and in the afternoon nothing.	
-	-	2	-	-	-	"	"	-	ditto	"	"	3	ditto	- ditto -	"	"	"	"	"		
-	-	2	-	-	-	"	"	-	Single-reefed topsails, jib, and courses.	N.W. by N.	W. by S.	3	Very moderate	- ditto -	"	"	"	"	"		
-	-	12	3	Yes	-	-	Steaming	-	None	E. ½ S.	N.N.Ely	2	Moderate	- Port quarter -	Topgallant yards across.	Square	All	All	All		All.
-	-	12	5	"	-	-	"	-	ditto	"	"	2	Very moderate	- ditto -	"	"	"	"	"		"
-	-	Stopped	-	-	-	Engines stopped ditto	-	-	None	-	S.W.	7	Long	- On bow -	No	Yes	All	All	All	All	The observations, when steaming head to swell, at 1, 2, 3, and 6 p.m., so small as not to be appreciable.
-	-	"	-	-	-	"	-	-	ditto	-	"	7	ditto	- ditto -	"	"	"	"	"	"	
4	8	8	-	Yes	No	No	Steaming	-	None	N.W. by W.	W.	6 to 7	Heavy	- Nearly ahead -	No	Yes	None	Probably all.	All	All	Whilst in this position, with regard to the seas, &c.
1	½	7	5	"	"	"	"	-	ditto	N.W. by N.	W.S.W.	"	ditto	- ditto -	"	"	"	None	None	None.	
1	½	3	5	No	"	Yes	Disconnected	-	Plain sail to topgallant sails.	N.W. by N.	W.S.W.	"	ditto	- Bow -	Yes	"	"	None	None	None.	
2	1½	3	-	"	"	"	"	-	All plain sail	N.W. ½ N.	"	"	ditto	- ditto -	"	"	"	"	"	"	
2	2	3	8	"	"	"	"	-	All plain sail, except royals	"	"	"	ditto	- ditto -	"	"	"	"	"	"	
3	4	3	5	"	"	"	"	-	ditto	"	"	"	ditto	- ditto -	"	"	"	"	"	"	
3	6	3	-	"	"	"	"	-	ditto	"	"	"	ditto	- Beam -	"	"	"	"	"	"	
6	8	8	5	"	Yes	No	Steaming	-	Plain sail to topgallant sails.	N.	"	6	ditto	- Beam and quarter -	"	"	"	"	"	"	
6	8	9	-	"	"	"	"	-	ditto	N.W. by N.	"	"	ditto	- Bow -	"	"	"	Probably all.	"	Probably all.	Whilst in this position only.
5	7	8	5	"	"	"	"	-	ditto	"	"	"	ditto	- ditto -	"	"	"	"	"	"	
-	-	7	5	"	"	"	"	-	Double-reefed topsails and foresail, and fore topstay-sail.	"	"	"	ditto	- ditto -	Topgallant	"	"	"	"	"	
-	-	7	5	Yes	No	No	Steaming	-	None	N.N.E.	W. by S.	7 & 8	Considerable	- Beam -	Topgallant	- Yes -	None	None	None	None.	
-	-	5	5	"	"	"	"	-	ditto	N.	"	"	ditto	- Abaft beam -	"	"	"	"	"	"	
-	-	5	5	No	No	Generally.	Fixed	-	Double-reefed topsails, fore and mizen topgallant sails, and fore topstaysails.	S.W. by S.	N.W.	8 to 5	Heavy	- Beam -	Topgallant	- Yes -	None without risk	None	None	On the 9th, when at general quarters, although the guns, with lower half-ports up, might occasionally have been worked, they were practically useless, as the sea washed into the muzzles directly they were exposed.	
-	-	6	-	No	No	Yes	Fixed	-	Single-reefed topsails, fore-sail, and fore topstaysail.	S.W. by S.	W.N.W.	6 to 7	Heavy	- Beam -	Topgallant	- Yes -	None without risk	None	None.		
-	-	5	5	No	No	Yes	Fixed	-	Single-reefed topsails, fore-sail, and fore topstaysail.	S.W.	N.W. by W.	6	Considerable	- Quarter -	Topgallant	- Yes -	None	None	None		None.
-	-	7	-	-	-	Yes, generally steaming	-	-	All plain sail and port studsails.	S.W.	E.N.E.	2	Moderate	- Aft -	Yes	A few degrees.	All	All	All		All.

"LORD CLYDE."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Lord Clyde"—*continued.*

DATE.	On Board.			Draft of Water as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.											
							Clinometer.					Battens.					Bar Instrument.			Clinometer.			Pendulum.			Bar Instrument.					
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Standard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	
																															Degrees.
h 12 October 1867 -	88	2	434	23 0	27 2	Every hour between 8 a.m. and 5 p.m.	3½	2½	6	7	11	3½	2½	6	5	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
⊙ 13 October 1867 -	87	2	423	22 11	27 2	- ditto -	3	2½	5½	7	9	3	2½	5½	6	9,10	Instrument not used, being disap- proved of.					-	-	-	Rolling to windward of perpendicular.			-	-	-	
☾ 14 October 1867 -	86	2	396	22 10	27 2	- ditto -	8	11	19	16	12	10	11	21	15	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
♂ 15 October 1867 -	85	2	387	22 9	27 2	- ditto -	-	-	-	24	10	-	-	-	-	Steaming for the Tagus.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29 October 1867 -	60	2	446	22 06	27 0	10 15 a.m.	9½	10	19½	12	10	9	9	18	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 15 "	11	10	21	19	10	10	11	21	19	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						12 30 "	10	10	20	12	11	11	10½	21½	12½	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 5 p.m.	17	17	34	21	11	17½	16½	34	21	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 30 "	18	16	34	19	11	18	17½	35½	19	11	Not used.				-	-	-	Ship rolling to windward of perpendicular.			-	-	-	-	
						2 30 "	16	16	32	18	11	16½	16½	33	18	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 30 "	14	16	30	17	11	13½	16	29½	17	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30 October 1867 -	59	2	432	22 06	27 0	10 5 a.m., and every quarter of an hour during exercise.	7	7	14	9	10	7	6	13	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Her Majesty's Ship "Lord Clyde," at Lisbon, }
9th November 1867.

"L O R D W A R D E N." -

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "LORD WARDEN."

[illegible]

"LORD WARDEN."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "LORD WARDEN."

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water		Number of Guns that could be fought with Safety.		Maximum Roll by Clinometer, ascertained every Half Hour.	REMARKS.						
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e. whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.								
-	-	5	0	-	Yes	-	Screw Connected.	Double - reefed topsails, foresails, and topgallant sails.	S.W. $\frac{3}{4}$ W.	W.N.W.	2 to 4	Long and heavy sometimes.	Quarter	-	-	Wind on quarter, wind a-beam.	After quarter port.	Three after.	All	All	Noon, 9 Oct. 1867.		The clinometer is hung up under the poop, where it projects over the wheel and quarter deck. The pendulum is fixed on the fore part of the chart house on the poop. The bar instrument is fixed on the star-board side of the poop.				
-	-	4	0	-	"	-		Double - reefed topsails, foresails, and main topgallant sail.	"	"	2	- ditto	-	ditto	-						-	Maximum		-	-	-	11
-	-	5	0	-	-	Yes		Double - reefed topsails, courses, and topgallant sails.	S.W. $\frac{3}{4}$ S.	N. Wly.	5	Considerable	-	Abaft beam	-						-	12.30		-	-	-	13
-	-	5	5	-	Yes	-		Double - reefed topsails, foresail, and topgallant sails.	S.W. $\frac{1}{2}$ S.	"	5	- ditto	-	ditto	-						-	1.0		-	-	-	11
-	-	5	0	-	"	-		- ditto	"	"	5	- ditto	-	ditto	-						-	1.30		-	-	-	11
-	-	5	0	-	-	Yes		- ditto	S.W. $\frac{3}{4}$ S.	N.W. by N.	5	- ditto	-	Abeam	-						-	2.0		-	-	-	12
-	-	6	0	-	Yes	-		- ditto	"	"	4 to 5	- ditto	-	ditto	-						-	2.30		-	-	-	10
-	-	8	0	-	"	-		- ditto	"	W. by S.	4 to 6	Long	-	ditto	-						-	3.0		-	-	-	10
-	-	6	8	-	"	-	- ditto	"	W. by N.	"	ditto	-	ditto	-	-	4.0	-	-	-	11							
-	-	6	5	-	Yes	-	Connected.	Double - reefed topsails and foresail.	S.W. $\frac{3}{4}$ W.	N.W.	5 & 4	Short	-	On quarter	-	-	Wind a point before the beam.	None	Four	All	All	5.30		-	-	-	11
-	-	7	0	-	-	Yes		- ditto	S.W.	"	"	ditto	-	ditto	-	-						6.0		-	-	-	10
-	-	7	0	-	-	"		- ditto	"	W.N.W.	"	Long	-	ditto	-	-						6.30		-	-	-	11
-	-	6	0	-	Yes	-		Double - reefed topsails, foresail, and main try-sail.	"	"	"	ditto	-	ditto	-	-						7.0		-	-	-	11
-	-	5	0	-	-	Yes		Single-reefed topsails, topgallant sails, foresail, and lee clew of main-sail.	"	"	"	ditto	-	ditto	-	-						7.30		-	-	-	12
-	-	6	0	-	Yes	-		- ditto	"	"	4	ditto	-	ditto	-	-						8.0		-	-	-	12
-	-	5	0	-	-	Yes		- ditto	"	"	"	ditto	-	ditto	-	-						8.30		-	-	-	15
-	-	4	5	-	-	"		- ditto	"	"	3	ditto	-	ditto	-	-						9.0		-	-	-	10
-	-	4	2	-	-	"		- ditto	"	"	"	ditto	-	ditto	-	-						9.30		-	-	-	10
-	-	4	0	-	-	"		- ditto	"	"	"	ditto	-	ditto	-	-						10.0		-	-	-	7 $\frac{1}{2}$
-	-	4	0	-	-	"		- ditto	"	"	"	ditto	-	ditto	-	-						10.30		-	-	-	6
-	-	4	0	-	-	"		- ditto	"	"	"	ditto	-	ditto	-	-						11.0		-	-	-	8
-	-	4	0	-	-	"		- ditto	"	"	"	ditto	-	ditto	-	-						11.30		-	-	-	7
-	-	4	0	-	-	"		- ditto	"	"	"	ditto	-	ditto	-	-						12.0		-	-	-	10

“ LORD WARDEN.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “ Lord Warden.”—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Provisions.	Stores.	Coals.	Forward.	Aft.		Clinometer.					Pendulum.					Bar Instrument.					Clinometer.			Pendulum.			Bar Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
							Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel. (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
																															Degrees.	Degrees.	Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
11 October 1867 -	- { Dry - - 110 Salt - - 55 }	6	450	23	2	27	10	H. M.		2.4	-	-	3	6	2	3	5	7	8	2	-	2	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

"LORD WARDEN."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Lord Warden"—continued.

Pitching, when ascertained.	Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		Maximum Roll by Clinometer, ascertained Every Half-hour.						
			Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.					Nature; i. e. whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	Hour.	Number of Degrees.	
																								A.M.	P.M.
Forward.	Aft.																								
Degrees.	E.	T.																							
-	1	-	-	-	Yes	Connected	Topsails on cap	N.W. by W.	S.E.	2 to 3	Long	-	Quarter	-	-	8					12.30	9	5		
-	1	5	-	-	"	"	-	S.W. by W.	E.	"	-	-	-	-	-	8	8			1.0	9	4			
-	5	-	-	Yes	-	"	-	"	"	"	-	-	-	-	-	10	10			1.30	7	3			
-	6	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			2.0	4	4			
-	6	8	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			2.30	4	4			
-	6	8	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			3.0	5	5			
-	6	8	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			3.30	4	6			
-	6	8	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			4.0	4	6			
-	6	8	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			4.30	3	2			
-	6	8	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			5.0	3	3			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			5.30	6	4			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			6.0	7	5			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			6.30	7	5			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			7.0	6	4			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			7.30	8	3			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			8.0	6	3			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			8.30	5	1			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			9.0	6	1			
-	7	-	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			9.30	9	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			10.0	7	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			10.30	8	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			11.0	7	2			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			11.30	6	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			12.00	5	2			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			12.30	9	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			1.0	9	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			1.30	7	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			2.0	4	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			2.30	4	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			3.0	5	6			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			3.30	4	6			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			4.0	3	2			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			4.30	2	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			5.0	3	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			5.30	6	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			6.0	1	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			6.30	0	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			7.0	7	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			7.30	8	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			8.0	6	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			8.30	-	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			9.0	-	1			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			9.30	-	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			10.0	6	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			10.30	98	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			11.0	10	2			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			11.30	8	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			12 noon	5	2			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			12.30	4	6			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			1.0	3	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			1.30	2	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			2.0	3	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			2.30	2	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			3.0	4	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			3.30	3	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			4.0	3	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			4.30	2	3			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			5.0	3	0			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			5.30	4	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			6.0	3	5			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			6.30	3	2			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			7.0	4	1			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			7.30	3	4			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			8.0	5	-			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			8.30	4	-			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			9.0	3	-			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			9.30	6	14			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			10.0	6	11			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			10.30	4	16			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			11.0	5	13			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			11.30	5	13			
-	7	5	-	"	-	"	-	"	"	"	-	-	-	-	-	12	12			12 noon	6	13			

100

[illegible]

"LORD WARDEN."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Lord Warden"—continued.

Pitching, when ascertained		Whether			SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could to be Fought with Safety.		Maximum Roll by Clinometer, ascertained every Half-hour.									
Forward.	Aft.	Speed.	Under Steam only.	Under Steam and Sail.			Under Sail only.	Whether with Screw Raised, or Disconnected and Revolving.	Direction.	Force.	Nature, i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	Time.	Degrees Rolled.						
																				A.M.	P.M.					
-	-	5	-	Yes	-	-	-	None	S. by W. ½ W.	South	3 & 4	Long	-	Quarter	-	Top-gallant yards only.	-	Yes	-	2	2	All	All	H. M.		
-	-	5	-	"	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			12 30	12	15
-	-	Taking station.	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			1 0	13	18
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			1 30	11	16
-	-	6	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			2 0	12	15
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			2 30	10	14
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			3 0	15	19
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			3 30	13	17
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	2	2			4 0	11	15
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			4 30	9	14
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			5 0	10	13
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			5 30	10	14
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			6 0	12	14
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			6 30	16	25
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			7 0	10	17
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-			7 30	11	20
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	8 0	14	21		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	8 30	16.5	20		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	9 0	17	20		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	9 30	18	14		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	10 0	20	18		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	10 30	19	21		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	11 0	17	22		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	11 30	12	21		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	12 0	14	23		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-	noon	noon	midnight.		
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	1	-					
-	-	5 8	"	-																						

"MINOTAUR."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "MINOTAUR."

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.															
							Clinometer.					Pendulum.					Bar Instrument.			Clinometer.			Pendulum.			Bar Instrument.									
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Standard.	Port.	Total.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Main).	Number of Heels per Minute.	Maximum Inclination.					
																															Degrees.				
	Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																													
20 August 1867	80	3	520	25 0	26 2	11 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	8	9	-	-	-	-	-	-				
						Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7	11	-	-	-	-	-	-		
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7	11	-	-	-	-	-	-	
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7	10	- Impracticable -						
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	9	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	7	9	-	-	-	-	-	-
23 August 1867	77	3	480	24 10	26 2	5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	7	8	-	-	-	-	-	-				
						10 0 a.m.	-	-	-	-	-	3	1	4	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	-	-	-	-	-	2	1	3	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						9 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9 October 1867	105	3	656½	25 8	26 2	12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.8	4.8	11	3.7	4.2	5	-	-	-				
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4.6	11	4.5	4.3	6	-	-	-		
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4.8	10	3.6	4	8	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.2	5.1	13	4.6	3.8	8	-	-	-	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	6	12	4.4	4.2	9	-	-	-	
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.1	5	12	-	-	-	-	-	-
10 October 1867	104	3	652½			8 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	5	13	3.5	4.2	6	-	-	-				
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	5	14	3.3	4	7	-	-	-		
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	5	12	3	3.8	6	-	-	-		
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.5	6	12	2.7	3.4	6	-	-	-		
						Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	11	2.5	3.4	5	-	-	-		
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6	12	2.6	3.6	5	-	-	-		
						2 0 "	-	-	-	-	-	1.4	5	6.4	13.0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	-	-	-	-	-	1	5	6	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 8 "	-	-	-	-	-	1.4	4	5.4	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						5 0 "	-	-	-	-	-	1.5	4	5.5	12	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						6 0 "	-	-	-	-	-	1.5	3	4.5	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						7 0 "	-	-	-	-	-	2.4	3.6	6	8	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 0 "	-	-	-	-	-	1.2	2.8	4	6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
14 October 1867	100	3	539½	25 3	26	6 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						9 0 "	-	-	-	-	-	3.5	6	9.5	13.8	7.2	2.5	4.1	6.7	10.7	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						10 0 "	-	-	-	-	-	3	6	9	15.10	7.2	2.5	4.1	6.7	11.7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						11 0 "	-	-	-	-	-	3.5	5.6	9	16.9	8	1.8	4.2	6	12.7	7.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						Noon	-	-	-	-	-	1.7	4.9	5.7	9.6	8	1	3	4	6.4	8.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						1 0 p.m.	-	-	-	-	-	3.5	5.0	8.5	12.7	8.8	1.7	3.7	5.4	9.5	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						2 0 "	-	-	-	-	-	3.5	5.5	9	10.8	7	1.5	3.5	5.0	7.5	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						3 0 "	-	-	-	-	-	2.5	6.0	8.5	11.7	7	1.7	3.5	5.2	8.5	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						4 0 "	-	-	-	-	-	2.5	5.5	8	13.8	7.6	2.1	4.5	6.7	8.5	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						5 0 "	-	-	-	-	-	2.8	6	8.8	13.7	7	2	4.1	6.1	8.6	7.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 0 "	-	-	-	-	-	2	3.5	5.5	9.6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
On the 8th, 11th, 12th, and 13th, no appreciable motion.						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				

On the 8th, 11th, 12th, and 13th, no appreciable motion.

"MINOTAUR."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "MINOTAUR."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "MINOTAUR."																								
Pitching, when ascertained.		Speed.		Whether			Whether with		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving,	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.							
-	-	2	7	-	-	Sail only.	Screw connected.	Capsails, single-reefed, fore and second topsails, fore-sail, and fore staysail.	S.S.W.	W.	8	Moderate, long	On bow	-	-	Yes	-	Yes	Probably all.	Probably all.	All	All.	No motion appreciable at any other period.	
-	-	2	5	-	-	"	"	Capsails, single-reefed, fore, second, and main top-sails, foresail, and fore staysail.	"	"	7	Moderate	-	-	ditto	-	-	"	"	All	"	"		"
-	-	2	5	-	-	"	"	ditto	S.W. by S.	W.N.W.	7	ditto	-	-	ditto	-	-	"	"	"	"	"		"
-	-	2	8	-	-	"	"	Capsails, single-reefed top-sails, topgallant sails, and foresail.	"	"	6	ditto	-	-	On beam	-	-	"	"	"	"	"		"
-	-	3	3	-	-	"	"	ditto	"	"	-	ditto	-	-	Beam	-	-	"	"	"	"	"		"
-	-	2	5	-	-	"	"	ditto	"	"	5	ditto	-	-	ditto	-	-	"	"	"	"	"		"
-	-	3	-	-	-	"	"	ditto	"	"	"	Moderate decreasing.	-	-	ditto	-	-	"	"	"	"	"		"
-	-	12	5	-	-	Steam only.	-	None	E. 1/2 S.	N.W.	3	Very moderate	-	-	Quarter	-	-	Yes	-	Square	-	"		"
-	-	1	-	-	-	-	-	ditto	"	"	2	ditto	-	-	ditto	-	-	"	"	"	"	"		"
2	1	6	-	-	-	Sail only.	Revolving	All, except mizen course and gaff sails.	S.W. by S.	N.W. by W.	6	Moderate	-	-	Beam	-	-	Yes	-	Mostly all.	All	All		All.
(9 per minute.)	1	5	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	"	"	"	"	"	
2	1	6	-	-	-	"	Disconnected	ditto	"	"	"	ditto	-	-	ditto	-	-	"	"	"	"	"	"	
-	-	6	-	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	"	"	"	"	"	
-	-	6	-	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	"	"	"	"	"	
-	-	5	5	-	-	"	"	All, except mizen course and gaff foresail and spanker.	"	"	"	ditto	-	-	ditto.	-	-	"	"	"	"	"	"	
-	-	6	-	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto.	-	-	"	"	"	"	"	"	
-	-	6	8	-	-	"	"	ditto	"	"	"	Moderate, long	-	-	ditto.	-	-	"	"	"	"	"	"	
14	1	6	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto.	-	-	"	"	"	"	"	"	
(9 per minute.)	-	8	2	-	-	"	"	ditto	"	"	7	ditto	-	-	ditto	-	-	"	"	"	"	"	"	
-	-	6	-	-	-	"	Disconnected	All, except mizen course and gaff foresail and spanker.	S.W.	N.W.	6	Moderate	-	-	Beam	-	-	Yes.	-	-	-	-	-	
-	-	5	8	-	-	"	"	ditto	"	N.N.W.	"	-	-	-	-	-	-	"	"	-	-	-	4.8, by signal.	
-	-	5	8	-	-	"	"	ditto	"	N.	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	5	8	-	-	"	"	ditto	"	"	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	5	5	-	-	"	"	ditto.	"	"	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	4	5	-	-	"	"	ditto.	"	"	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	5	5	-	-	"	"	ditto.	"	"	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	4	5	-	-	"	"	ditto.	"	"	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	4	-	-	-	"	"	ditto	"	"	"	-	-	-	-	-	-	"	"	-	-	-		-
-	-	3	5	-	-	"	"	ditto	"	N.E.	4	Slight ditto	-	-	ditto	-	-	"	"	-	-	-		-
-	-	3	-	-	-	"	-	None	S. by W.	S. by W.	3	Moderate	-	-	Beam	-	-	-	-	All	All	All		All.
-	-	5	8	-	-	"	-	ditto	"	1/2 W.	"	Long, moderate	-	-	ditto	-	-	-	-	-	-	-	-	8.47, saw "Lord Warden" roll very heavily. By signal.
-	-	5	8	-	-	"	-	ditto	"	"	"	Moderate and very long.	-	-	Quarter	-	-	-	-	-	-	-	-	
-	-	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	0.15 p.m., noticed "Warrior" take some heavy rolls.
-	-	6	-	-	-	"	-	ditto	"	S.	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	
-	-	6	-	-	-	"	-	ditto	S.W. by S.	S.S.W.	6	Moderate and very long.	-	-	ditto.	-	-	-	-	-	-	-	-	4.50, "Lord Clyde" rolling heavily.
-	-	6	-	-	-	"	-	ditto	"	"	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	
-	-	6	-	-	-	"	-	ditto	"	"	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	4.50, "Lord Clyde" rolling heavily.
-	-	3	-	-	-	"	-	Fore and aft, except mizen topsail and spanker.	S.S.W.	W.	2	Moderate, long	-	-	ditto	-	-	-	-	-	-	-	-	
-	-	4	-	-	-	"	-	ditto	"	"	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	4.50, "Lord Clyde" rolling heavily.
-	-	4	2	-	-	"	-	ditto	"	"	"	Moderate, decreasing.	-	-	ditto.	-	-	-	-	-	-	-	-	
-	-	4	2	-	-	"	-	ditto	"	"	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	4.50, "Lord Clyde" rolling heavily.
-	-	4	2	-	-	"	-	ditto	"	"	"	ditto	-	-	ditto.	-	-	-	-	-	-	-	-	

1990 1991 1992 1993 1994

“ P A L L A S.”

Year	Number of Cases
1998	100
1999	150
2000	200
2001	250
2002	300
2003	400
2004	500

[illegible]

“MINOTAUR.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Minotaur”—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature, <i>i. e.</i> , whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction, <i>i. e.</i> , whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
Degrees.																				
-	-	4	-	Yes	-	-	-	None	-	S.E. by E.	E.N.E.	3	Moderate, long -	Quarter	-	-	All	All	All	By signal. Performing steam evolutions.
-	-	4	-	"	-	-	-	ditto	-	"	"	"	- ditto	ditto	-	-	-	-	-	
-	-	4	5	"	-	-	-	ditto	-	E.N.E.	N.E.	"	- ditto	Beam	-	-	-	-	-	
-	-	4	-	"	-	-	-	ditto	-	"	"	"	- ditto	Quarter	-	-	-	-	-	
3	2	4	-	"	-	-	-	ditto	-	S.E.	"	"	- ditto	Ahead	-	-	-	-	-	

J. G. Goodenough, Captain.

“PALLAS.”

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty’s Ship “PALLAS.”

1	1	2	1	-	-	Yes	-	No	-	All plain sail	-	S. by E.	E. by S.	3	Moderate swell	Quarter	-	-	Yes	-	Yes	-	All	All	All	All.
-	-	2	5	-	-	"	-	"	-	ditto	-	"	"	"	-	ditto	-	-	"	-	"	-	"	"	"	"
3	2	1	5	-	-	"	-	"	-	ditto	-	N.N.E.	"	2	-	ditto	-	-	"	-	"	-	"	"	"	"
2	3	1	5	-	-	"	-	"	-	ditto	-	"	"	"	-	ditto	-	-	"	-	"	-	"	"	"	"
1	1	3	-	-	-	"	-	"	-	ditto	-	S.E. by S.	E. by N.	1 to 2	-	ditto	-	-	"	-	"	-	"	"	"	"
1	2	2	5	-	-	"	-	"	-	ditto	-	E.S.E.	N.E.	2	-	ditto	-	-	"	-	"	-	"	"	"	"
2	3	5	-	Yes	-	-	-	-	-	None	-	Steaming round target.	E.	1	Moderate swell	Quarter	-	-	Yes	-	No	-	All	All	All	All.
3	4	5	-	"	-	-	-	-	-	ditto	-		"	"	-	ditto	-	-	"	-	"	-	"	"	"	"
2	3	-	-	"	-	-	-	-	-	ditto	-		"	"	-	ditto	-	-	"	-	"	-	"	"	"	"
1	2	-	-	"	-	-	-	-	-	ditto	-		"	"	-	ditto	-	-	"	-	"	-	"	"	"	"

G. H. G. Lambert Captain.

"PRINCE CONSORT."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "PRINCE CONSORT."

Pendulum placed on Fore Side } of After Hatchway, Main Deck, Amidships.
Clinometer placed on After Side }

Climometer placed on After Side of After Hatchway, Main Deck, Main Mast.																																			
DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.													
							Clinometer.					Pendulum.					Bar Instrument.					Clinometer.			Pendulum.			Bar Instrument.							
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	Total.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	Total.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	Total.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.					
																															Degrees.				
25 October 1867 - -	80	2½	431	23 4	26 6	H. M.																													
						3 30 p.m.	4.0	3.5	7.5	{ 6 11 }	10.2	5.5	4	9.5	11	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	3.2	1.3	4.5	{ 5 9 }	10.0	5.5	3.7	9.2	10	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 "	2.9	2.5	5.4	{ 5 8 }	11.4	4.7	2.6	7.3	9	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						7 0 "	4.3	3.4	7.7	{ 9 10 }	11.4	5.3	3.3	8.6	9	10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						8 0 "	6.2	4.0	10.2	{ 10 14 }	8.0	6.0	3.6	9.6	9	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						9 0 "	1.5	1.1	2.6	4	10.2	4.6	2.5	7.1	8	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 a.m.	4.0	3.3	7.3	{ 7 10 }	10	5.6	3.8	9.2	10	10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 "	3.9	2.8	6.7	{ 7 9 }	11.6	4.3	3.2	7.5	8	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	2.4	1.3	3.7	{ 5 8 }	10	5.0	2.5	7.5	9	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						4 0 "	3.3	2.8	6.1	{ 7 8 }	10	5.0	2.8	7.8	7	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						26 October 1867 - -	79	2½	414	-	-	5 0 "	2.2	1.2	3.4	{ 5 9 }	8.4	3.4	1.4	4.8	6	9	-	-	-	-	-	-	-	-	-	-	-	-	-
6 0 "	3.0	3.0	6.0	{ 7 7 }	10.6							5.1	3.1	8.2	10	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
7 0 "	7.0	6.0	13.0	{ 12 17 }	10.8							6.2	4.8	11.0	10	10.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
8 0 "	5.0	4.3	9.3	{ 9 10 }	10.8							6.9	4.5	11.4	10	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
9 0 "	3.4	3.1	6.5	{ 6 17 }	10.0							3.0	1.5	4.5	7	10.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
10 0 "	4.2	3.8	8.0	{ 10 12 }	10.8							6.7	5.6	12.3	11	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11 0 "	2.1	2.1	4.2	{ 6 12 }	10.4							5.6	4.8	10.4	10	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
12 0 "	7.0	6.2	13.2	{ 15 12 }	10.0							4.0	2.3	6.3	7	10.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 0 p.m.	6.5	6.2	12.7	{ 12 11 }	11.2							7.9	7.0	14.9	13	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2 0 "	5.5	5.0	10.5	{ 9 12 }	8.9							6.0	5.2	11.2	10	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3 0 "	6.2	5.7	11.9	{ 10 14 }	8.4							6.4	5.4	11.8	10	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4 0 "	6.9	6.1	13.0	{ 13 15 }	11.2							7.1	5.2	12.3	15	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5 0 "	2.6	2.5	5.1	{ 6 8 }	10.2	4.0	3.2	7.2	9	11.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
6 0 "	Rolling very little					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
7 0 "	5.6	5.3	10.9	{ 15 13 }	7.6	6.6	5.6	12.2	11	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8 0 "	4.8	4.6	9.4	{ 10 7 }	6.8	3.6	1.5	5.1	7	6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

"PRINCE CONSORT."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "PRINCE CONSORT."

Battens. Two poles placed on each side of After Bridge.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.		Course.	Wind.		Sea or Swel		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.		Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.								
-	-	6	-	Yes	-	-	-	-	-	None	-	Various	S.W. by S.	3	Moderate	-	Beam	-	-	Yes	-	No	-	All	All	All	All.	
Not sufficient to record.	-	4	5	"	-	-	-	-	-	"	-	S.W. by W.	S.W.	2	Very moderate	-	Bow	-	-	"	-	"	-	"	"	"	"	
		-	-	No	-	Yes	No	-	Plain, except royals	-	W.N.W.	"	1	-	-	-	-	-	-	-	-	-	-	-	-	-	Simultaneous.	
-	-	-	-	-	-	"	-	"	-	-	ditto	-	"	"	1	Very moderate	-	Bow	-	-	Yes	-	No	-	All	All	All	All.
-	-	-	-	-	-	"	-	"	-	-	ditto.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Not sufficient to record.	-	-	-	-	-	"	-	"	-	-	ditto	-	W.N.W.	"	3	-	ditto	-	-	ditto	-	"	-	"	-	"	"	10 p.m., 11 p.m., and mid- night. Rolling not suf- ficient to register.
1½	1	-	5	-	-	Yes	-	No	-	Topsails and fore and aft staysails.	-	"	"	1 to 2	-	ditto	-	-	ditto	-	"	-	Yes	-	"	"	"	"
-	-	1	-	-	-	-	-	-	-	-	ditto	-	-	-	-	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"
-	-	-	5	-	-	-	-	-	-	-	ditto	-	W.N.W.	-	-	-	ditto	-	-	Beam	-	"	-	"	-	"	"	"
-	-	-	5	-	-	Yes	-	No.	-	-	-	-	-	-	-	-	-	-	"	-	"	-	"	-	"	"	"	
-	-	-	5	-	-	-	-	-	-	-	ditto	-	-	S.W. by S.	2	-	ditto	-	-	Bow	-	"	-	No	-	"	"	"
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	1	-	-	-	-	-	-	-	-	None	-	-	N.E.	2	Very moderate	-	Quarter	-	-	Yes	-	No	-	All	All	All	All.
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	Yes	-	No	-	-	-	None	-	Various	E.	3	-	ditto	-	-	Various	-	"	-	"	-	"	"	Steam evolutions.
Nothing worthy of notice	-	-	Yes	-	-	-	-	-	-	-	"	-	"	"	3	-	ditto	-	-	ditto	-	"	-	"	-	"	"	- - ditto.
-	-	4	-	"	-	-	-	-	-	-	"	-	N.N.E.	"	3	-	ditto	-	-	Bow	-	"	-	"	-	"	"	- - ditto.
-	-	4	-	"	-	-	-	-	-	-	"	-	"	"	3	-	ditto	-	-	ditto	-	"	-	"	-	"	"	- - ditto.
-	-	4	-	"	-	-	-	-	-	-	"	-	Various	E.S.E.	4	-	ditto	-	-	Beam	-	"	-	"	-	"	"	- - ditto.
-	-	4	-	"	-	-	-	-	-	-	"	-	"	"	4	-	ditto	-	-	ditto	-	"	-	"	-	"	"	- - ditto.
-	-	2	5	"	-	-	-	-	-	-	"	-	N.E.	"	2	-	ditto	-	-	ditto	-	"	-	"	-	"	"	- - ditto.
-	-	1	-	No	-	Yes	-	No	-	Topsails	-	"	S.E. by E	2	-	ditto	-	-	ditto	-	"	-	"	-	"	"	"	-
-	-	-	-	"	-	-	-	-	-	ditto	-	"	"	2	-	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"
-	-	-	5	"	-	Yes	-	-	-	ditto	-	N. by E.	E.	1	-	ditto	-	-	Bow	-	"	-	Yes	-	"	"	"	"

* Screw does not hoist up.

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.												
							Clinometer.					Pendulum.					Bar Instrument.			Clinometer.			Pendulum.			Bar Instrument.						
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.		
																															Degrees.	
	Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																										
27 October 1867 - -	78	2½	406	-	-	Noon -	3·1	3·3	6·4	6	5·4	3·8	2·8	6·6	7	8·2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28 October 1867 - -	77	2½	399	-	-	8 0 a.m.	-	-	-	-	-	1·6	1·0	2·6	3	8·0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						10 0 a.m.	4·6	3·2	7·8	{ 7 10	10·6	5·6	3·2	8·8	10	10·8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 „	3·7	3·1	6·8	{ 10 7	10·4	4·7	3·1	7·8	7	10·4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						Noon -	5·0	4·0	9·0	{ 12 10	10	5·4	4·1	9·5	10	9·6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						12 47 p.m.	7·3	6·5	13·8	{ 14 16	11·2	7·4	6·2	13·6	17	11·2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29 October 1867 - -	76	2½	389	23 4	26 6	1 0 „	-	-	-	{ 19 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 „	8·6	8·0	16·6	{ 15 14	11·6	8·1	8·9	17·0	15	11·6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 „	6·0	5·5	11·5	{ 11 4	10·4	6·4	5·4	11·8	10	10·4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 „	2·2	1·5	3·7	{ 4 8	10·0	2·3	2·1	4·4	4	10·0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 „	2·0	3·0	5·0	{ 6 7	8·0	3·8	4·0	7·8	7	8·0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 „	1·8	2·0	3·8	4	6·6	3·3	4·1	7·4	9	8·8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30 October 1867 - -	75	2½	376	-	-	9 52 a.m.	2·2	2·9	5·1	4	11	2·9	2·1	5·0	5	11·0	2·8	2·7	5·5	4	11·6	By Battens.			-	-	-	-	-	-	-	-
						10 42 „	2·4	2·9	5·3	6	11·2	3·3	3·1	6·4	7	11·0	3·2	2·7	5·9	6½	11·6				-	-	-	-	-	-	-	-

JOURNAL to accompany Rolling Return.

Date, 1867.	Sailing.	Steaming.	Tacking.	Wearing.	Rolling.
25 October - -	Good, compared with other ships of squadron.	Steaming out of Tagus in company with squadron.	No - - - -	No - - - -	Easily - - - -
26 October - -	- - ditto - -	Performing evolutions	No - - - -	No - - - -	Ditto - - - -
29 October - -	- - ditto - -	- - ditto - -	No - - - -	No - - - -	Ditto - - - -
30 October - -	- - ditto - -	Steaming round target	No - - - -	No - - - -	Ditto - - - -

Her Majesty's Ship "Prince Consort," at Sea, off Lisbon,
7 November 1867.

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised,* or Disconnected and Revolving.	SAIL SET.			Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.						Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
-	-	-	-	No	-	Yes	-	No	-	Topsails - - -	N.W.	N.N.E.	1	Very moderate -	Bow - - -	- Yes -	- Yes -	All	All	All	All	Hove to.
-	-	2	-	No	-	Yes	-	No	-	Topsails - - -	N.N.W.	N.E.	2	Very moderate -	Bow - - -	- Yes -	- Yes -	All	All	All	All	Not rolling sufficiently for clinometer to register. Hove to.
-	-	4	-	Yes	-	-	-	-	-	None - - -	E.	N.E.	2	Moderate - - -	Beam - - -	- Yes -	- No -	All	All	All	All	Steam evolutions.
-	-	5	-	"	-	-	-	-	-	ditto - - -	"	"	2	- ditto - - -	ditto - - -	- " -	- " -	"	"	"	"	- ditto.
-	-	5	-	"	-	-	-	-	-	ditto - - -	"	"	2	- ditto - - -	ditto - - -	- " -	- " -	"	"	"	"	- ditto.
-	-	4	-	"	-	-	-	-	-	ditto - - -	"	"	3	- ditto - - -	ditto - - -	- " -	- " -	"	"	"	"	Per signal.
-	-	5	-	"	-	-	-	-	-	ditto - - -	"	"	3	- ditto - - -	ditto - - -	- " -	- " -	"	"	"	"	Simultaneous.
-	-	5	-	"	-	-	-	-	-	ditto - - -	"	"	3	- ditto - - -	ditto - - -	- " -	- " -	"	"	"	"	
-	-	5	-	"	-	-	-	-	-	ditto - - -	"	"	3	- ditto - - -	ditto - - -	- " -	- " -	"	"	"	"	
Nothing worthy of record.	-	5	-	-	-	Yes	-	No	-	All plain sail - - -	N.W.byN.	"	1	Very moderate -	ditto - - -	- " -	- Yes -	"	"	"	"	Simultaneous during general quarters.
	-	5	-	-	-	"	-	"	-	ditto - - -		"	1	Very moderate -	ditto - - -	- " -	- Yes -	"	"	"	"	
-	-	4	5	Yes	-	-	-	-	-	None - - -	Various	S.W.	2	Very moderate -	Beam - - -	- Yes -	- No -	All	All	All	All	Simultaneous during general quarters.

* Screw does not hoist up.

JOURNAL to accompany Rolling Return.

Pitching.	Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.	REMARKS.
Very little and easy -	Could fight all the guns.	According to dock-yard arrangement.	Quite dry - -	Good, compared with other iron-clads.	- None.
- ditto - -	- ditto - -	- ditto - -	- ditto - -	- ditto - -	- ditto.
- ditto - -	- ditto - -	- ditto - -	- ditto - -	- ditto - -	- ditto.
- ditto - -	- ditto - -	- ditto - -	- ditto - -	- ditto - -	- ditto.

E. A. Inglefield, Captain.

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "ROYAL OAK," from 25th to 30th October 1867.

RETURN OF OBSERVATIONS MADE DURING THE VOYAGE OF THE S.S. "ALBATROSS" FROM NEW YORK TO SAN FRANCISCO, 1867.																																				
DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minutes' Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.														
							Battens.					Pendulum.					Extremes of Roll by Clinometer each Hour.					Battens.			Pendulum.			Bar Instrument.								
	Starboard.	Port.	TOTAL.				Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Standard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.									
				Degrees.																								Degrees.					Degrees.			
Provisions.	Stores.	Coals.	Forward.	Aft.	H.	M.	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Standard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.						
25 October 1867 -	90	None	419	23 7	24 7		2	0	p.m.	6	6.5	12.5	11	11.6	5	6	11	10	11.6	-	-	-	-	-	-	-	-	-	-	-	-	-				
							3	0	"	4.5	4.7	9.2	9.5	10.8	4	4	8	8	10.8	Found to be useless																
							4	0	"	5	5	10	10.5	11.6	4	4	8	10	11.6																	
							5	0	"	6.5	6.5	13	10.5	11.2	6	7	13	10	11																	
26 October 1867 -							6	0	a.m.	7.5	7.5	15	13	12	6	7	13	12	12	13	13	-	-	-	-	-	-	-	-	-	-	-				
							7	0	"	5	5	10	11	12.4	4	5	9	10	12.4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
							8	0	"	3	4	7	8.5	11.6	3	4	7	8	11.6	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-		
							9	0	"	4	4.5	8.5	11	12	4	4	8	10	12	16	15	-	-	-	-	-	-	-	-	-	-	-	-	-		
							10	0	"	3	4	7	8	12	3	3	6	7	12	12	17	-	-	-	-	-	-	-	-	-	-	-	-	-		
							11	0	"	7	8	15	14	12	6	7	13	13	12	13	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							12	0	"	4.5	4	8.5	9	12	4	4	8	9	12	10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							1	0	p.m.	5	6	11	10.5	12	5	5	10	10	12	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							2	0	"	3.5	4	7.5	8	12.4	3	4	7	8	12.4	9	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
							3	0	"	8	9	17	14.5	12	7	9	16	14	12	13	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
							4	0	"	4	4	8	8	12.4	4	4	8	7	12.4	11	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
							5	0	"	2.5	3.5	6	7.5	12.4	2	3	5	5	12.4	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27 October 1867 -							7	0	a.m.	1.5	2.3	3.8	4	12.4	Not taken					-	4	3	-	-	-	-	-	-	-	-	-	-				
							12	0	"	1.5	2.3	3.8	4	12.8	Not taken					-	6	3	-	-	-	-	-	-	-	-	-	-	-	-		
							5	0	p.m.	-	-	-	-	-	-	-	-	-	-	-	-	2	5.4	2.5	-	Not taken	-	-	Useless	-	-	-	-	-	-	
28 October 1867 -							7	0	a.m.	-	-	-	-	-	-	-	-	-	-	-	-	1.5	6	2	-	Not taken	-	-	Useless	-	-	-				
							4	0	p.m.	7	6	13	12	12	6	6	12	11	12	11	12	-	-	-	-	-	-	-	-	-	-	-	-	-		
							5	0	"	5	3.5	8.5	9	12	4	3	7	7	12	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29 October 1867 -							11	0	a.m.	3.5	3.0	6.5	8	12	3	3	6	7	12	15	15	-	-	-	-	-	-	-	-	-	-	-	-			
							12	0	"	5	4.5	9.5	8.5	12	4	4	8	7	12	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							12	45	p.m.	9	8	17	12.5	11.6	8	7	15	11	11.6	13	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							2	0	"	7	6.5	13.5	15	12	6	6	12	11	12	19.5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							3	0	"	6	5	11	14	11.6	5	4	9	12	11.6	15	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							4	0	"	4.5	4.5	9	7	12	4	4	8	7	12	12	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 October 1867 -							10	0	a.m.	1.5	2.5	4	4.5	12	-	1	1	2	12	7	6	-	-	-	-	-	-	-	-	-	-					
							11	0	"	3.5	3	6.5	5	12	2	2	4	3	12	10	13	-	-	-	-	-	-	-	-	-	-	-	-	-		
							12	0	"	3	2.5	5.5	8	12	2	2	4	4	12	7	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

"ROYAL OAK."

RETURN of ROLLING and PERFORMANCES at SEA of Her Majesty's Ship "ROYAL OAK," from 25th to 30th October 1867.

RETURN OF ROLLING AND EXPERIMENTS AT SEA OF THE BATTLESHIP "ALBATROSS", NOVEMBER 1898.																										
Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.						Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.					
Degrees.																										
4.5	-	7	-	Yes.	-	-	-	-	-	-	-	W.	W.N.W.	2	Short swell	Starboard bow	-	Yes	-	No	-	All	All	All	All	The battens are on the after bridge. Edge's clinometer in the fore cabin. Bar instrument on the end of the after bridge, and pendulum in the square of after hatchway on lower deck.
2	-	6	-	"	-	-	-	-	-	-	-	N.W. by W.	S.W.	2	Swell	-	-	"	-	"	-	"	"	"	"	
1	-	5	5	"	-	-	-	-	-	-	-	"	"	2	Long swell	-	-	"	-	"	-	"	"	"	"	
1	-	5	5	-	Yes.	-	Stopped	-	-	-	-	"	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1	-	-	5	-	-	Yes	Stopped	-	-	-	-	N.W.	S.W.	2	Long swell	Starboard bow	-	Yes	-	Yes	-	All	All	All	All	Squadron performing steam evolutions. Found the pendulum almost useless, the bar instrument perfectly so. Edge's clinometer giving considerably more than the proper roll of the ship, its pendulum working with a jerk. The method of ascertaining the roll by battens apparently very simple and correct.
1 1/2	-	-	5	-	-	"	ditto	-	-	-	-	"	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1	-	-	-	-	Sails furled	-	ditto	-	-	-	-	N.	E.	1	- ditto	-	-	"	-	No	-	"	"	"	"	
1	-	-	-	-	ditto	-	ditto	-	-	-	-	"	"	4	- ditto	-	-	"	-	"	-	"	"	"	"	
2	-	5	-	Yes.	-	-	-	-	-	-	-	Various	"	4	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	"	3	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	S.E.	3	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	E.	3	- ditto	-	-	"	-	"	-	"	"	"	"	
1	-	5	-	"	-	-	-	-	-	-	-	"	S.W.	1	- ditto	-	-	"	-	"	-	"	"	"	"	
2	-	3	-	-	-	Yes.	-	-	-	-	-	N. by E.	S.E.	3	Moderate	-	-	"	-	"	-	"	"	"	"	
1	-	-	5	-	-	Yes.	-	-	-	-	-	N.	E.N.E.	1	Moderate	Starboard bow	-	Yes	-	Yes	-	All	All	All	All	Sunday, 27th, the rolling was only registered three times, the motion being very slight.
1 1/2	-	-	5	-	-	"	-	-	-	-	-	N.W.	N.N.E.	1	- ditto	-	-	"	-	"	-	"	"	"	"	
1	-	2	5	-	-	"	-	-	-	-	-	"	"	3	Slight swell	-	-	"	-	"	-	"	"	"	"	
1	-	2	-	-	-	es.	-	-	-	-	-	N. by W.	N.E.	3	Slight swell	Starboard bow	-	Yes	-	Yes	-	All	All	All	All	Monday 28th, signal from flag. "Register rolling only when signal is made." Rolling considerably in the afternoon, therefore registered at 4 and 5 p.m.
1	-	3	-	-	-	"	-	-	-	-	-	S.E. by E.	N.	3	Long swell	Port quarter	-	"	-	No	-	"	"	"	"	
1	-	3	-	-	-	"	-	-	-	-	-	"	"	3	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	Yes.	-	-	-	-	-	-	-	Various.	S.E.	2	Long swell	Ahead	-	Yes	-	No	-	All	All	All	All	The rolling this day was registered during the time that steam evolutions were being performed, the observation at 12.45 being by signal, and simultaneously taken by the whole fleet.
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	3	-	"	-	-	-	-	-	-	-	E. by N.	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	"	"	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	5	-	"	-	-	-	-	-	-	-	Various	"	1	- ditto	-	-	"	-	"	-	"	"	"	"	
1 1/2	-	-	-	"	-	-	-	-	-	-	-	N.E.	E.	1	Moderate	-	-	"	-	"	-	"	"	"	"	
1	-	2	-	Yes.	-	-	-	-	-	-	-	N. by W.	E. by N.	1	Moderate	From N.N.E.	-	Yes	-	No	-	All	All	All	All	Rolling registered only during the time the fleet was exercising with great guns at a mark, sails furled, &c.
1	-	1	-	"	-	-	-	-	-	-	-	E.	E.S.E.	2	- ditto	-	-	"	-	"	-	"	"	"	"	
1	-	2	-	"	-	-	-	-	-	-	-	S.E.	S.E.	2	- ditto	-	-	"	-	"	-	"	"	"	"	

"WARRIOR."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "WARRIOR."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "WARRIOR"																																		
DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minutes' Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.														
							Battens.					Pendulum.					Bar Instrument.			Battens.			Pendulum.			Bar Instrument.								
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.				
																															Degrees.			
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																													
9 October 1867	115	2½	512	25 0	27 1	10 25 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	4½	10	-	-	-	-	-	-	-			
						3 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8½	4½	12	9.6	4½	11 12	7 10	4 4.8	10 15	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10 October 1867	114	2½	498	25 0	27 1	8 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	7½	-	-	-	-	-	-	-			
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	5	12	-	-	-	-	-	-		
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7½	5	17	8	5	17	7½	5	16½		
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	5	12	8	5	11½	7½	5	11½		
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	5	9	6½	4½	10½	7	4½	9½		
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4½	9½	7	4½	10½	6	4½	10		
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	8	6½	5	9	5½	5	8½		
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	5	8	4½	5	9	5½	5	8½		
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5½	5	8	-	-	-	-	
						7 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2½	5½	3	2½	5	3½	2½	5	5½	
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4½	4½	5	5½	4½	5	5½	4½	5	
11 October 1867	113	2½	481	25 0	27 1	9 0 "	3	2½	6	7½	10	2½	2	4½	7	10	3	2½	5½	6½	10	-	-	-	-	-	-	-	-	-	-			
						10 0 "	1½	1	2½	6½	10	2½	1½	4	5½	10	2	1½	3½	5½	10	-	-	-	-	-	-	-	-	-	-	-		
						11 0 "	1	2	3	5	10	1½	2½	4	5½	10	1	2	3½	5	10	-	-	-	-	-	-	-	-	-	-	-		
						12 0 "	1	1	2	2½	10	1	1	2	2½	10	1	1	2	2½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 p.m.	1	1	2	4½	10	1	2	3	5	10	1½	2	3½	5	10	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 "	1	1	3	4½	10	1	2	3	5	10	1	2	3	5	10	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	1½	2	2½	4	10	1	2½	3½	4½	10	1½	2	2½	4	10	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	½	2	2½	4	10	1	2½	3½	4½	10	½	2	2½	4	10	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	½	1½	2	4	10	½	1½	2	4½	10	½	1½	2	4	10	-	-	-	-	-	-	-	-	-	-	-	-	-
						8 0 "	-	-	-	-	-	½	1	1½	3½	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 October 1867	112	2½	455	25 0	27 1	7 0 a.m.	½	1	1½	3½	10	½	1	1½	3	10	1	1	2	3½	10	-	-	-	-	-	-	-	-	-	-			
						8 0 "	½	1	1½	3	10	2	1	1½	3	10	1½	1	1½	3	10	-	-	-	-	-	-	-	-	-	-	-		
						9 0 "	1	1½	2½	4	9½	1½	1½	3	4½	9½	1½	2	3½	4½	9½	-	-	-	-	-	-	-	-	-	-	-	-	
						10 0 "	1	1½	2½	4	10	1½	1½	3	4½	10	1	1½	2½	4½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	1	1½	2½	4	10	1	1½	2½	4½	10	1	1½	2½	4½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						12 0 "	1	1	1½	3	10	1	1	1½	3½	10	1	1	1½	3½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 p.m.	1	1½	2½	4½	10	1	2½	3½	5	10	1½	2	3½	4½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 "	1	2	2½	5	10	1	2½	3½	5	10	1	2½	3½	5	10	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	1	2½	3½	5½	10	1½	2½	3½	5½	10	1½	2½	3½	5½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	1	1½	2½	4½	10	1	1½	2½	4½	10	1	2	3	4½	10	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	1	2	3	4½	10	1½	2½	3½	5	10	1½	2	3	4½	10	-	-	-	-	-	-	-	-	-	-	-	-	
8 0 "	-	-	-	-	-	2	3½	3½	7	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
13 October 1867	111	2½	443	25 0	27 1	7 0 a.m.	1	3	4	7½	9	1½	3½	4½	8	9	1	3½	4½	8	9	-	-	-	-	-	-	-	-	-	-			
						8 0 "	3	5	8	11	9	5½	5½	12	12	9	5½	5½	12	12	9	-	-	-	-	-	-	-	-	-	-	-		
						9 0 "	2	4	6	13	9	2½	4½	15	15	9	2½	4½	15	15	9	-	-	-	-	-	-	-	-	-	-	-		
						10 0 "	½	2½	3½	5½	8½	½	2½	3	5	8½	1	3	4	6	8½	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	½	2½	3½	5½	8½	½	2½	3	5	8½	1	3	4	6	8½	-	-	-	-	-	-	-	-	-	-	-	-	
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	-	-	-	-	-	2½	5½	7½	15½	10	2	5½	7½	15	10	-	-	-	-	-	-	-	-	-	-	-	-	-
						8 0 "	-	-	-	-	-	4	8	13	18	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 0 "	-	-	-	-	-	5	8	13	16	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						

Batten broken

“WARRIOR.”

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship “WARRIOR.”

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.		Course.	Wind.		Sea or Swell		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be fought with Safety.		REMARKS.				
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.					
Degrees.																									
2	2	-	-	-	Yes	-	Neither	-	Double reefed topsails and courses.	S. W. by S.	N. W. by W.	7 to 8	Considerable long sea.	Abeam	-	Yes	-	Yes	-	None	10	All	All	Battens - - - } On fore Bar instrument } bridge. Pendulum.—After part of main deck.	
1 1/2	1 1/2	5	8	-	-	Yes	"	-	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	-	-		
2	2	6	-	-	-	"	"	-	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	-	-		
2	2	5	2	-	-	Yes	Neither	-	Double reefed topsails and courses.	S. W. by S.	N. W. by W.	7 to 8.	Considerable long sea	-	-	-	-	-	-	-	None.	-	-		
2	2	6	-	-	-	"	"	-	ditto	"	"	6	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	5	5	-	-	"	-	-	ditto	S. W.	"	7	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	6	8	-	-	"	-	-	Double reefed topsails and courses.	"	-	-	-	-	-	-	-	-	-	Quarterly.	-	-			
1 1/2	1	6	2	-	-	"	-	-	ditto.	-	N. W.	6	-	-	-	-	-	-	-	-	-	-			
1 1/2	1	5	-	-	-	"	-	-	-	-	N.	5	-	-	-	-	-	-	-	-	-	-			
1 1/2	1	4	5	-	-	"	-	-	-	-	N. N. E.	5	-	-	-	-	-	-	-	Square.	-	-			
1 1/2	1	4	5	-	-	"	-	-	-	-	N. E.	2	-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	Topsails on the cap	W. S. W.	-	-	-	-	-	-	-	-	-	-	-	-			
1 1/2	1	2	-	-	-	Yes	Neither	-	Double reefs and top gallant sails.	S. W.	S. by E.	3	Moderate	-	Astern	-	Yes	-	Square	-	All	All	All	All	Battens - - - } On fore Bar instrument } bridge. Pendulum.—After part of main deck.
1 1/2	1 1/2	7	-	-	Yes	-	-	-	ditto	"	"	"	ditto.	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1	7	3	-	-	-	-	-	All plain sail.	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	Topmast and topgallant studding sails.	S. S. W.	-	4	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 1/2	1 1/2	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-								

"WARRIOR"—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—*continued.*

[illegible]

JOURNAL to accompany Return of Rolling.

1. Sailing.—Left Queenstown under sail on 8th October, in company with Her Majesty's ships "Minotaur," "Achilles," "Bellerophon," "Lord Warden," and "Lord Clyde"; Wind, N.W.; Force, 6 to 8; Course, S.W.; wind consequently on the beam. While the strong wind lasted, without any sail on the mizen mast, and propeller down, the ship carried so much weather-helm (between 20 and 26 degrees) that she was with difficulty kept from broaching-to, and occasionally could not retain her station. The helm was relieved by the wind drawing either forward or aft. During the night the wind fell light, the same thing occurred ship could not retain her station.

During the night the wind fell light, the same thing occurred, ship could not be kept from coming-to without occasionally steaming. On the two following days we had a strong wind from the westward; in consequence of bad steering, unpractised helmsmen, and quartermasters, the ship could not be kept her course without steam; since that

I gather from this cruise that the "Warrior" is fast under sail, comparatively, with other ships of the squadron; that with the propeller down, either in very strong or light winds, she cannot be trusted to keep her station under sail; in fact, it is not safe to be without steam at command. This accounts for the large expenditure of coal during the first part of the cruise. The defect is not want of speed but difficulty in steering.

2. Steaming.—I consider the "Warrior" to be at speeds of six and seven knots equal to any ships in the squadron in point of economy of fuel. At high speeds no trial has been made, but she cannot be expected to do as well as formerly, owing to the reduced pressure on her boilers.

- "WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees.																							
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Battens - } On fore Bar instrument } bridge. Pendulum, after part of main deck.		
1	1	4	-	Yes	-	-	-	-	-	None	S. by W. $\frac{1}{4}$ W.	S.S.W.	3	-	-	-	-	-	-	-	-		
1	1	4	8	"	-	-	-	-	-	-	-	-	4 to 6	-	-	-	-	-	-	-	-		
1	1	3	8	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	5	1	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	5	2	"	-	-	-	-	-	-	-	-	4 to 5	-	-	-	-	-	-	-	-		
1	1	5	6	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	5	6	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	6	-	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	5	5	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	Stopped.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	4	-	-	Yes	-	Neither	-	-	All plain sail	W.N.W.	S.W.	2	Moderate	-	Abeam	-	Yes	Quarterly	All	All	All	Instruments; battens and bar instrument on fore bridge; pendulum, stanchion of wheel, upper deck.
1	1	3	-	-	Yes	-	-	-	-	ditto	"	"	"	-	ditto	-	ditto	-	"	"	"	"	
1	1	-	-	-	Yes	-	-	-	-	All plain sail	N.W. $\frac{1}{2}$ W.	-	-	Moderate	-	Abeam	-	Yes	Quarterly	All	All	All	All
1	1	-	-	-	-	-	-	-	-	ditto	W.	S.W.	1	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	Yes	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	-	-	"	-	-	-	-	-	-	-	-	-	-	ditto.	-	-	-	-	-	-	-	
1	1	2	-	-	Yes	-	-	-	-	Topsails and topgallant sails.	N. by E.	S.	2	-	ditto.	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	ditto	N. $\frac{3}{4}$ E.	-	-	-	-	-	-	-	-	-	-	-	
1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	1	2	-	-	Yes	-	-	-	-	Topsails and courses	S.E.	E. by N.	2	-	-	Braced up Square.	-	Yes	-	All	All	All	All
1	1	1	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</		

Henry Boys, Captain.
F. Inglis, Staff Commander.

Journal to accompany Return of Rolling—*continued.*

3. Tacking.—No trial.
4. Wearing.—No trial.
5. Rolling.—She appears to roll heavily, but slowly and easily. I think she rolls as deeply as any ship in the squadron, but did not show the slightest appearance of working or straining anywhere.
6. Pitching.—Not sufficient sea to enable me to form an opinion.
7. Power of Fighting Guns.—The power of fighting her guns was reduced by her rolling propensities, but during the cruise there was no time, that the main-deck guns could not have been fought without shipping much water; in fact, a division of quarters was drilled about the time she was rolling most heavily; the unsteady platform would naturally disturb accuracy of fire.
8. Distribution of Weights.—Not yet had sufficient experience of the ship to form an opinion, but think that the fore-castle guns might with advantage be secured further aft, without much additional fitting.
9. Dryness.—Not sufficient sea to wet the upper deck.
10. General Handiness.—Under steam the ship steers beautifully; but under the reduced sail, as she has been the greater part of the time, she was at times all but unmanageable without steam. I think, however, that with her propeller up and proper amount of canvas, she would be as handy as any ship of her length possibly could be.

Her Majesty's Ship "Warrior," 15 October 1867.

(signed) *Henry Boys*, Captain.

LETTER from Admiral *Warden* to the Secretary of the Admiralty.

Forwarding Rolling Returns.

Sir
 "Minotaur." I HAVE the honour to forward herewith, for the information of the Lords
 "Prince Consort." Commissioners of the Admiralty, the Rolling Returns and Abstracts, from the
 "Bellerophon." ships named in the margin, between the 9th and 30th October 1867.
 "Royal Oak."
 "Achilles."
 "Lord Warden."
 "Warrior."
 "Lord Clyde."
 "Pallas."

I have, &c.
 (signed) *Fred. Warden*,
 Rear Admiral Commanding.

The Secretary of the Admiralty.

TABLE (B.)

ABSTRACT of Return of Rolling of Ships, 9th October 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll. *	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate on beam - -	Minotaur (10 observa- tions.)	Sail only; 10 points from wind -	{ P. 6.1 B. 3.8	5.1 4.1
	Bellerophon - -	(Not taken.)		
Long and heavy a little abaft beam.	Achilles (1 observation)	Sail only; 8 points from wind -	{ C. 5.4 P. 8.8 B. 5.9	6. 5. 8.
Long and heavy on beam -	Lord Warden (7 obser- vations.)	Steam and sail; 10 points from wind.	{ C. 8.3 P. 11.4 B. I. 9.1	9.1 7.9 6.1
Considerable abeam - -	Warrior (2 observations)	Sail only; 8 points from wind -	{ B. I. 8.5 P. 9.3 B. 7.5	4.4 4.5 4.5
Heavy on beam - -	Lord Clyde (day's ave- rage.)	Sail only; 8 points from wind -	{ C. 21. B. 21.5	11. 11.

TABLE (B.)

ABSTRACT of Return of Rolling of Ships, 10th October 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate on quarter - -	Minotaur (12 observa- tions.)	Sail only; 12 to 16 points from wind.	{ P. 5.9 B. 2.7	7.6 3.6
Moderate on beam - -	Bellerophon (11 obser- vations.)	Steam and sail; 10 points from wind.	{ C. 7.5 P. 8.2 B. 3.	5.1 5.5 9.7
Long, a little abaft the beam	Achilles (15 observa- tions.)	Sail only; 10 points from wind -	{ C. 2.7 P. 3.2 B. 2.2	5.2 5.8 5.8
Long on quarter - -	Lord Warden (10 obser- vations.)	Steam and sail; 10 points from wind.	{ C. 9.6 P. 14.4 B. I. 11.2	9.6 10. 7.7
Considerable on quarter -	Warrior (8 observations)	Sail only; 12 points from wind -	{ B. I. 6.2 P. 6.5 B. 6.1	4.8 4.9 4.9
Considerable on quarter -	Lord Clyde (day's ave- rage.)	Sail only; 7 points from wind -	{ C. 23. B. 21.5	11. 11.

* B. I. Bar Instrument.

C. Clinometer.

P. Pendulum.

B. Batten.

ABSTRACT of Return of Rolling of Ships, 11th October 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
	Minotaur - - -	No appreciable motion.		
	Bellerophon - - -	- ditto.		
Moderate on beam - -	Achilles (9 observations)	Steam and sail; 14 points from wind.	{ C. 1.4 P. 2. B. 1.4	5. 6.5 5.
Moderate on quarter - -	Lord Warden (11 observations.)	Steam and sail; 13 points from wind.	{ C. 5.2 P. 6.3 B. I. 4.9	5.8 9. 6.5
Moderate astern - - -	Warrior (9 observations)	Steam and sail; 5 points from wind	{ B. I. 3.2 P. 3.1 B. 2.8	10. 10. 10.
Moderate aft - - -	Lord Clyde (day's average.)	Steam and sail; 14 points from wind.	{ C. 7. B. 6.5	10. 10.

ABSTRACT of Return of Rolling of Ships, 12th October 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
	Minotaur - - -	No appreciable motion.		
	Bellerophon - - -	- ditto.		
	Achilles - - -	- ditto.		
Moderate on quarter - -	Lord Warden (11 observations.)	Under steam - - -	{ C. 3.7 P. 4.6 B. I. 3.7	4.3 7.8 5.1
Slight on quarter - - -	Warrior (11 observations.)	- ditto - - -	{ B. I. 2.7 P. 2.7 B. 2.4	10. 10. 10.
Moderate aft - - -	Lord Clyde (day's average.)	- ditto - - -	{ C. 6. B. 6.	10.6 10.6

ABSTRACT of Return of Rolling of Ships, 13th October 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
	Minotaur - - -	No appreciable motion.		
	Bellerophon - - -	- ditto.		
Moderate on bow - - -	Achilles (8 observations)	Under steam - - -	{ C. 4.2 P. 5.7 B. 3.2	8. 8. 9.
Long aft - - -	Lord Warden (1 observation.)	- ditto - - -	{ C. 9.5 P. 13. B. I. 12.	8. 5. 11.
Slight on beam - - -	Warrior (8 observations)	- ditto - - -	{ B. I. 4.3 P. 7. B. 3.	5.6 6.6 4.5
Moderate on beam - - -	Lord Clyde (day's average.)	All plain sail; 6 points from wind	{ C. 5.5 B. 5.5	9. 9.

ABSTRACT of Return of Rolling of Ships, 14th October 1867.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate and long on quarter	Minotaur (17 observations.)	Under steam - - -	{ P. 8·3 B. 6·2	7·8 8·2
Considerable on bow - -	Bellerophon (12 observations.)	- ditto - - -	{ C. 10·3 P. 11·3 B. 9·4	8·7 8·7 8·7
Long and heavy on quarter -	Achilles (24 observations)	- ditto - - -	{ C. 7·4 P. 9·1 B. 6·3	6·3 7·2 6·7
Long and heavy on quarter -	Lord Warden (11 observations.)	- ditto - - -	{ C. 12·5 P. 14·4 B. I. 14·5	9·1 9·4 9·7
Long on quarter - - -	Warrior (11 observations.)	- ditto - - -	{ B. I. 13·3 P. 13·7 B. 12·6	9·1 9·2 9·1
Considerable and long on beam	Lord Clyde (day's average.)	- ditto - - -	{ C. 19· B. 21·	12· 12·

ABSTRACT of Return of Rolling of Ships, 26th October 1867.

From 7 a.m. to 3 p.m., Nine Observations.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
	Minotaur - - - Bellerophon - - Lord Warden - - Lord Clyde - - Pallas - - -	} Not taken.		
Long on bow - - -	Achilles (9 observations)	Under steam - - -	{ C. 2·3 P. 3·3 B. 2·5	8·7 9·3 8·1
Moderate abeam - - -	Warrior (9 observations)	- ditto - - -	{ B. I. 6·2 P. 6·6 B. 5·7	9· 9· 9·
Moderate on bow and beam -	Prince Consort (9 observations.)	- ditto - - -	{ C. 9·9 P. 10·4	10·1 10·9
Long on bow and beam -	Royal Oak (9 observations)	- ditto - - -	{ P. 9·3 B. 10·	12· 12·

ABSTRACT of Return of Rolling of Ships, 29th October 1867.

PERFORMING STEAM EVOLUTIONS.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
Long and moderate on beam and quarter.	Minotaur (5 observa- tions.)	Under steam - - - -	{ P. 6·4 B. 3·1	8·2 8·
Long on beam and quarter -	Bellerophon (7 obser- vations.)	- ditto - - - -	{ P. 10·7 B. 8·6	8·2 8·4
Very long on beam and quarter.	Achilles (7 observa- tions.)	- ditto - - - -	{ P. 5·3 B. 5·9	8· 7·8
A heavy swell from various directions.	Warrior (7 observa- tions.)	- ditto - - - -	{ B.I. 9·9 P. 9·3 B. 9·	9· 9· 9·
Long heavy swell from all directions.	Lord Warden (6 obser- vations.)	- ditto - - - -	{ C. 9·3 P. 14·9 B. 12·	7·5 7·2 9·8
Long ground swell on beam and quarter.	Lord Clyde (7 observa- tions.)	- ditto - - - -	{ C. 27· B. 27·4	10·7 10·7
Moderate on beam - -	Prince Consort (6 ob- servations.)	- ditto - - - -	{ C. 10·9 P. 11·4	10·7 10·6
Long from various directions	Royal Oak (6 observa- tions.)	- ditto - - - -	{ P. 9·6 B. 11·1	11·8 11·8
	Pallas - - -	Under sail only; <i>not</i> performing evolutions.		

ABSTRACT of Return of Rolling of Ships, 30th October 1867.

TARGET PRACTICE.

State of the Sea, as recorded by each Ship.	Name of Ship.	How Navigating.	Total Mean Roll.	Oscillation per Minute Mean.
			<i>Degrees.</i>	<i>No.</i>
	Minotaur - - -	No appreciable motion.		
	Bellerophon - -	Not taken.		
Moderate on quarter - -	Achilles (2 observa- tions.)	Under steam - - - -	B. 2·6	7·1
Slight swell from various di- rections.	Warrior (4 observa- tions.)	- ditto - - - -	{ B.I. 6·7 P. 6·4 B. 6·3	9·2 9·2 9·2
Moderate from various direc- tions.	Lord Warden (3 obser- vations.)	- ditto - - - -	{ C. 3·3 P. 11·8* B. 4·7	2·8 11· 9·1
Moderate on beam - -	Lord Clyde (average) -	- ditto - - - -	{ C. 14· B. 13·	10· 10·
Moderate on beam - -	Prince Consort (2 ob- servations.)	- ditto - - - -	{ C. 5·2 P. 5·7 B. 5·7	11·1 11· 11·6
Moderate on beam and quarter	Royal Oak (3 observa- tions.)	- ditto - - - -	{ P. 3· B. 5·3	12· 12·
Moderate from various direc- tions.	Pallas (4 observations)	- ditto - - - -	{ C. 11·7 P. 11·2 B.I. 13·	

* One observation.

NAVY (CHANNEL FLEET).

COPY of Admiral *Warden's* REPORT of the
TRIALS of the CHANNEL FLEET in 1867; and,
COPY of the REMARKS of Vice Admiral *Robin-*
son, Controller of the Navy, thereon.

(*Mr. Laird.*)
(*Lord Henry Lennox.*)

Ordered, by The House of Commons, to be Printed,
6 March 1868.

[*Price 2s.*]

128.

Under 12 oz.

NAVY (CHANNEL FLEET).

RETURN to Two Orders of the Honourable The House of Commons,
dated 20 and 28 February 1868;—for,

(ORDER, 20 February 1868.)

COPY “of Admiral *Warden’s* REPORT of the TRIALS of the CHANNEL FLEET
in 1867.”

(*Mr. Laird.*)

(ORDER, 28 February 1868.)

“THAT there be added to the RETURN relative to the NAVY (CHANNEL FLEET)
[ordered 20th February], COPY of the REMARKS of Vice Admiral
Robinson, Controller of the Navy.”

(*Lord Henry Lennox.*)

Admiralty, }
5 March 1868. }

JOHN HENRY BRIGGS.
Chief Clerk.

Ordered, by The House of Commons, to be Printed,
6 March 1868.

COPY of Admiral *Warden's* REPORT of the TRIALS of the CHANNEL FLEET
in 1867.

(No. 226.)

Rear Admiral *Warden* to the Secretary of the Admiralty.

(Report of Proceedings of Channel Squadron.)

Sir,

"Minotaur" at Lisbon, 3 December 1867.

I HAVE to request that you will acquaint my Lords Commissioners of the Admiralty, that the cruise of the squadron under my orders, from the 20th November to the 2nd instant, was, on the whole, a satisfactory one, and the time well employed.

2. Previous to the departure of the "Royal Oak" for England, on the 23rd ultimo, I availed myself of every opportunity of practising evolutions in three columns; on the afternoon of one of these days, the wind freshened so much, as to render such exercise further inexpedient; and accordingly, I put the squadron under sail, on the starboard tack, and made the signal to "chase to windward" and "optional disconnect screws."

3. The trial lasted from noon to 4 p.m., during which time this ship, with her screw disconnected, was going from 4 to 5 and 6 knots, the screw revolving from 10 to 16 times in a minute:—the "Warrior's" screw was raised.

4. When the recall was made, at 4 o'clock, the following was the extraordinary result:—

The "Achilles"—

	<i>Yards.</i>	<i>Miles.</i>
Beat "Minotaur" - - - - -	9,774,	or $4\frac{1}{2}$
Beat "Lord Warden" - - - - -	9,610,	or $4\frac{3}{4}$
Beat "Bellerophon" - - - - -	9,268,	or $4\frac{1}{2}$
Beat "Prince Consort" - - - - -	8,940,	or $4\frac{1}{2}$
Beat "Royal Oak" - - - - -	5,513,	or $2\frac{3}{4}$
Beat "Warrior" - - - - -	2,527,	or $1\frac{1}{4}$

"Lord Clyde" is not taken into account, as she was thrown to leeward by having to pass this ship, and was placed at a considerable disadvantage.

"Pallas" was "nowhere."

To put the result in another form:—

	<i>Yards.</i>	<i>Miles.</i>
"Achilles" gained to windward of "Minotaur" -	9,774	or $4\frac{1}{2}$
"Warrior" - ditto - ditto -	7,147	or $3\frac{1}{2}$
"Royal Oak" - ditto - ditto -	1,449	
"Lord Warden" ditto - ditto -	765	
"Prince Consort" ditto - ditto -	634	
"Bellerophon" - ditto - ditto -	506	

"Lord Clyde" lost to leeward 436 yards, stated, as before, to be accidental.

The "Pallas" was "nowhere" from inability to do more.

Diagrams are enclosed which will verify these figures.

5. It is very remarkable to find a ship, in the short space of four hours, beating a very similar ship, as much as five miles dead to windward; and
128—I. 3.

beating some of the latest constructed ships almost to the same extent; and this, it is to be remembered, by a ship, which, but one year ago, under a different system of masting, had great difficulty in getting from one tack to the other by tacking, and had actually, on one occasion, refused to wear.

It is impossible, I think, to advance anything stronger in favour of giving the "Minotaur" three masts instead of five, whenever concurrent circumstances admit of the transformation being made.

6. On the 26th November, the weather being favourable, a full-speed trial, under steam, was made from 8 a.m. to 4 p.m. The patent log of "Minotaur," the sternmost ship but one, showed 90 miles, and that of the "Helicon," which was the headmost ship, showed 104 miles; and the following was the result, viz. :—

"Achilles" gained,—

					Yards.	Miles.
On "Lord Clyde"	-	-	-	-	26,822, or	13 $\frac{1}{2}$
On "Bellerophon"	-	-	-	-	20,422, or	10 $\frac{1}{4}$
On "Minotaur"	-	-	-	-	20,000, or	10
On "Pallas"	-	-	-	-	17,411, or	8 $\frac{3}{4}$
On "Prince Consort"	-	-	-	-	16,669, or	8 $\frac{1}{4}$
On "Warrior"	-	-	-	-	13,744, or	6 $\frac{3}{4}$
On "Lord Warden"	-	-	-	-	9,561, or	4 $\frac{3}{4}$
"Achilles" lost on "Helicon"	-	-	-	-	2,805, or	1 $\frac{1}{2}$

7. Here again we have the "Achilles," one of the first iron-clad ships built after "Warrior" and "Black Prince," distancing in a run of 100 miles, occupying eight hours, some of the latest constructed ships (and they containing generally the most recent improvements which have taken place in condensers, &c.), in a very remarkable manner; and even holding her own, within a couple of miles, with a very fast despatch vessel, in weather very favourable to the latter.

8. It is to be borne in mind also, that while the engines of the "Achilles" develop only about 5,700 horse-power to drive 6,000 tons, those of "Bellerophon," "Lord Warden," and "Lord Clyde," were constructed to develop about 6,000 horse-power to drive 4,000 tons. It is a result, I think, calculated to give rise to very serious reflection.

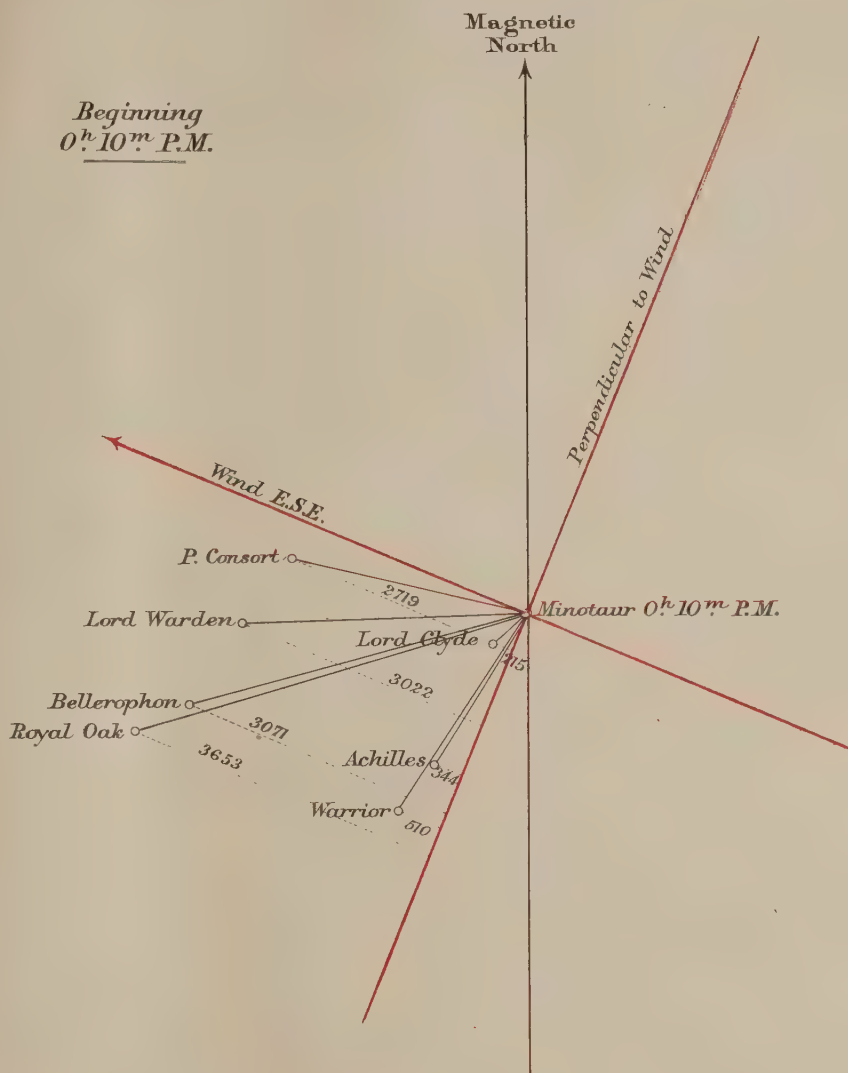
9. The diagram, illustrating the above trial, will be forwarded at an early opportunity, together with the details of it, for their Lordships' information.

10. Friday, the 29th ultimo, was devoted to target practice, and I regret to add that it was attended by three accidents; one, in the "Achilles," by the premature explosion of a cartridge in loading one of the guns, by which one of the gun's crew unfortunately lost his arm: the second in the "Lord Clyde," by the bursting of a shell in one of the 7-inch 6 $\frac{1}{2}$ -ton guns, by which a piece of the muzzle was blown off, without, however, any further accident to any one; and the third, in the "Warrior," where an 8-inch gun of the main-deck battery, in firing the first round, drew the pivoting bolt.

11. After this, the weather began to break up, and I returned here on the 2nd instant, as stated in another letter, No. 223.

12. The remainder of the time not thus particularly specified, was occupied in performing evolutions by subdivisions, and other necessary exercises, comprising experiments with the 12-ton gun, as opportunity offered.

I have, &c.
(signed) *Frederick Warden,*
Rear Admiral Commanding.

TRIAL OF SAILING ON A WIND, 22ND NOV^R 1867.

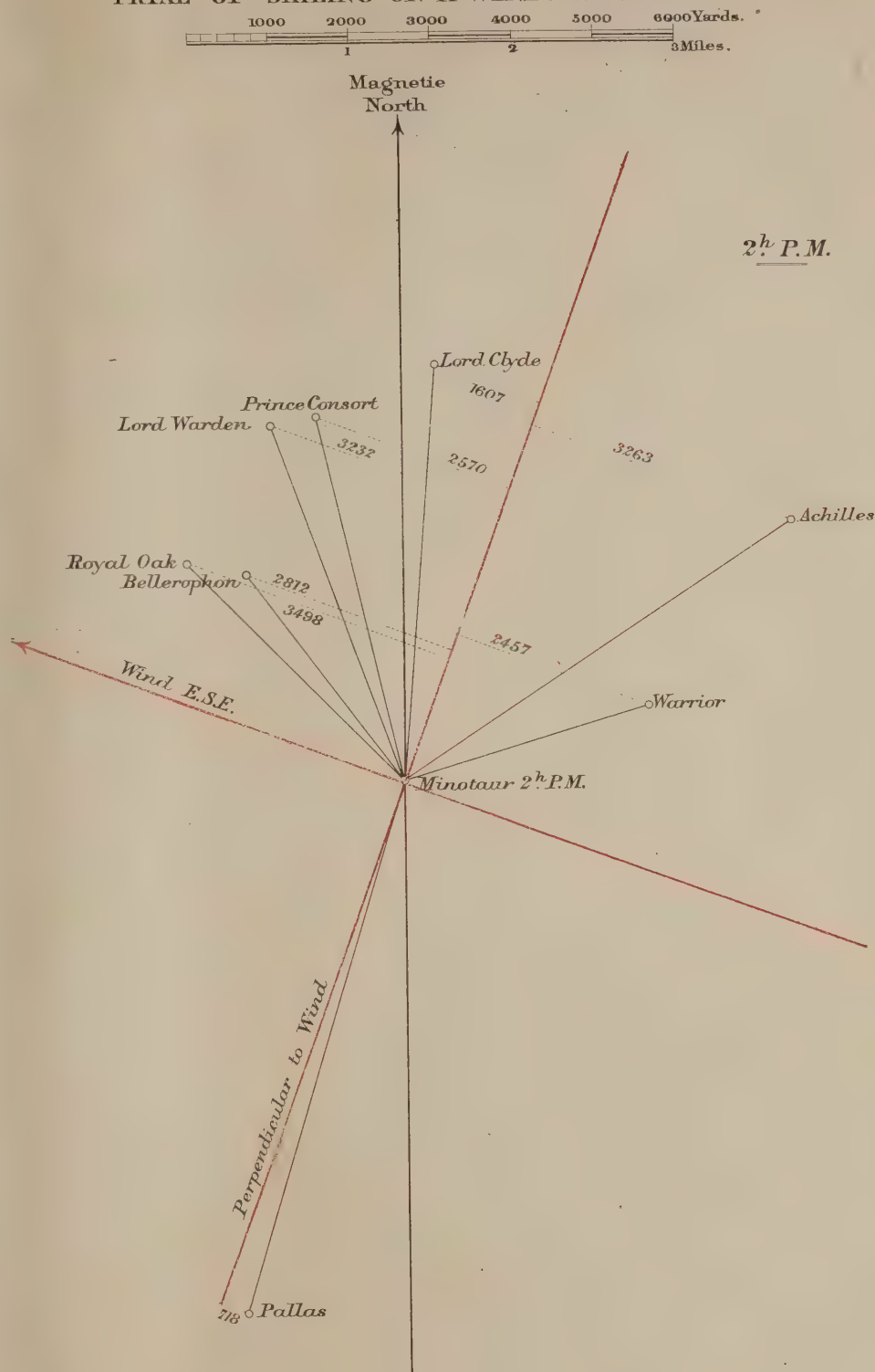
Wind E.S.E. Force 6. Course N.E. Sea smooth.

Speed of "Minotaur" 4 knots. All sail set. Heel 4° to 6°

Screw disconnected but at times not revolving.

Leeway 1 Point. Helm 25° to 30° a-weather.

<i>Lord Clyde</i>	S. 49° W.	490 yards
<i>Achilles</i>	S. 33 W.	1983 —"
<i>Warrior</i>	S. 34 W.	2673 —"
<i>Prince Consort</i>	N. 77 W.	2761 —"
<i>Lord Warden</i>	S. 89 W.	3308 —"
<i>Bellerophon</i>	S. 75 W.	3897 —"
<i>Royal Oak</i>	S. 74 W.	4700 —"
<i>Pallas</i>	not ready	

TRIAL OF SAILING ON A WIND. 22ND NOV^R 1867.

Wind E.S.E. Force 6. Course N.E. Sea Smooth. Heel 4° to 6°
 Speed of "Minotaur" 4 knots. All sail set. Leeway 1 P^t

Lord Clyde	N. 5° E.	5200 yards.
Achilles	N. 57 E.	5834 " "
Warrior	N. 73 E.	3208 " "
Prince Consort	N. 13 W.	4679 " "
Lord Warden	N. 20 W.	4739 " "
Bellerophon	N. 37 W.	3247 " "
Royal Oak	N. 44 W.	3800 " "
Pallas	S. 17 W.	6875 " "

NAVY (CHANNEL FLEET).

COPY of Admiral Warden's REPORT of the
TRIALS of the CHANNEL FLEET in 1867; and,
COPY of the REMARKS of Vice Admiral Robin-
son, Controller of the Navy, thereon.

(*Mr. Laird.*)
(*Lord Henry Lennox.*)

Ordered, by The House of Commons, to be Printed,
6 March 1868.

[*Price 10d.*]

128—I.

Under 2 oz.

NAVY (CHANNEL FLEET).

RETURN to an Order of the Honourable The House of Commons,
dated 29 July 1868;—for,

COPY “of a REPORT from Rear Admiral *Warden*, dated the 11th day of July 1868, enclosing LETTERS from Rear Admiral *Ryder* and the Commanding Officers of Her Majesty’s Ships in the Channel Squadron, upon the subject of the respective Merits of the various Ships.”

Admiralty, }
29 July 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

(*Admiral Seymour.*)

Ordered, by The House of Commons, to be Printed,
31 July 1868.

C O N T E N T S.

	PAGE
No. 1.—Report from Rear Admiral Warden to the Secretary of the Admiralty, dated	
11 July 1868	3

Enclosures in the above Report :

1. Report on the Cruise of the Channel Squadron, from Rear Admiral Ryder	9
2. Ditto . . from Captain MacDonald, H.M.S. "Bellerophon"	27
3. Ditto . . from Captain Goodenough, H.M.S. "Minotaur"	28
4. Ditto . . from Captain Hillyar, H.M.S. "Royal Oak"	33
5. Ditto . . from Captain Vansittart, H.M.S. "Achilles"	34
6. Ditto . . from Captain Boys, H.M.S. "Warrior"	37
7. Ditto . . from Captain May, H.M.S. "Defence"	39
8. Ditto . . from Captain Armytage, H.M.S. "Prince Consort"	42
9. Ditto . . from Captain Lambert, H.M.S. "Pallas"	43
10. Rolling Returns as taken by signal.	

No. 2.—Letter from Rear Admiral Warden to the Secretary of the Admiralty, forwarding	
the following Rolling Returns and Abstracts	45
1. Rolling Returns, H.M.S. "Minotaur"	46
2. Ditto . . H.M.S. "Bellerophon"	52
3. Ditto . . H.M.S. "Achilles"	64
4. Ditto . . H.M.S. "Warrior"	92
5. Ditto . . H.M.S. "Royal Oak"	110
6. Ditto . . H.M.S. "Prince Consort"	128
7. Ditto . . H.M.S. "Defence"	144
8. Ditto . . H.M.S. "Pallas"	156
9. Abstracts of Rolling Returns	166

COPY of a REPORT from Rear Admiral *Warden*, dated the 11th day of July 1868, enclosing LETTERS from Rear Admiral *Ryder* and the Commanding Officers of Her Majesty's Ships in the Channel Squadron, upon the subject of the respective Merits of the various Ships.

— No. 1. —

(No. 170.)

REPORT from Rear Admiral *Warden* to the Secretary of the Admiralty.

Sir,

“Minotaur,” at Spithead,
11 July 1868.

IN obedience to the instructions contained in their Lordships' orders of the 26th May and 16th June last (M), I put to sea from Portland on the 4th of June with the ships named in the margin; but owing to light winds and other causes, I did not come within the limits of the cruising ground until the 17th of June, nor did I reach the rendezvous, lat. 46° N., long. 19° W., until the 18th.

Minotaur.
Bellerophon.
Royal Oak.
Achilles.
Warrior.
Defence.
Prince Consort.

2. On the 13th June, the “Defence” was detached to the rendezvous to meet the “Helicon,” and she rejoined my flag on the 18th.

The “Pallas” joined the squadron on the 19th June, having been fourteen days on the passage; and on the 28th I left the cruising ground, and kept upon what I considered would be the track of the “Juno” till the Tuesday following, when, not falling in with her, I proceeded on my return, reaching this anchorage on the 6th instant.

3. It will thus be seen that the squadron was at sea, on the whole, thirty-three days, and I made every endeavour to give effect to their Lordships' wishes on the several points laid down in their instructions, but the state of the weather has been so exceptionally fine, with very light winds and smooth water, that it has not been favourable to the development of the ships' qualities under trial.

4. This will be the more apparent, when I state that the barometer has been registered below thirty inches on three days only, and never reached a lower point than 29.74; that the force of the wind has only been recorded above Force 5, on five different days, viz.:

Force 7, for one hour, on two occasions, the 20th and 21st June, and Force 6, for short periods, on the 7th, 8th, and 23rd June.

In the same way the water has been quite smooth, with occasionally an ordinary Atlantic swell, moderate and long. On one occasion, the 10th of June, the rolling recorded on board this ship was 11" maximum and 9° mean; that is to say, 5½ and 4½ degrees each way.

On all the other days the motion on board the “Minotaur” was scarcely appreciable.

5. It must be obvious, even to any casual observer, but more especially to seamen, that these conditions of wind and weather, although pleasant and enjoyable, are not such as are calculated to develop the qualities of ships, nor are they such as could, by any possibility, justify me in speaking dogmatically on the performances of any one of those under review.

I do not, however, consider this as of any great importance, as the qualities of all these ships are perfectly known from former experience of them.

We know exactly what they will do under all circumstances, except how they will behave in a heavy gale of wind; and the “Warrior” possesses even this advantage.

6. But while this is the case as regards that point, I do not doubt that the cruise has been eminently useful both to officers and men.

The general exercise aloft, the gunnery practice and drills, the evolutions, as opportunity offered,—all have been carried on in a way which I hope has made a very fine weather cruise that which I have described it above.

7. There have been only two trials of sailing. No trials of speed under steam have been made, as that, on this occasion, was neither desired nor ordered. Two days' practice at a target; one day "prepare for action," and night quarters on two occasions. Four days of foggy weather prevented anything being done.

8. The trials of sailing took place on the 20th and 29th of June, and the following tabular statements will give all the detailed particulars, and show that, on both occasions, the "Warrior" was first and the "Bellerophon" last.

RESULT of Trial of Sailing on a Wind, 20 June 1868, showing the Distance Gained or Lost to Windward during Four Hours.

+ indicates Gain. — indicates Loss. Wind, N. W. Force, 5 to 3. Slight north-westerly swell.

SHIPS' NAMES.	Warrior.	Pallas.	Defence.	Achilles.	Prince Consort.	Minotaur.	Royal Oak.	Bellerophon.
	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>
Warrior - - - - -	-	3,520+	4,469+	5,069+	5,863+	5,997+	6,023+	8,197+
Pallas - - - - -	3,520—	-	949+	1,549+	2,343+	2,477+	2,503+	4,677+
Defence - - - - -	4,469—	949—	-	600+	1,394+	1,528+	1,554+	3,723+
Achilles - - - - -	5,069—	1,549—	600—	-	794+	928+	954+	3,128+
Prince Consort - - - - -	5,863—	2,343—	1,394—	794—	-	134+	160+	2,334+
Minotaur - - - - -	5,997—	2,477—	1,528—	928—	134—	-	26+	2,200+
Royal Oak - - - - -	6,023—	2,503—	1,554—	954—	160—	26—	-	2,174+
Bellerophon - - - - -	8,197—	4,677—	3,723—	3,128—	2,334—	2,200—	2,174—	-

Ships under all plain sail.

"Royal Oak" missed stays once, compelling "Minotaur" to lose considerably in tacking. No other ship missed stays.

"Royal Oak" never disconnected.

RESULT of Trial of Sailing on a Wind, 29 June 1868, showing the Distance Gained or Lost to Windward during Seven Hours.

+ indicates Gain. — indicates Loss. Wind, E. by S. Force, 5. Sea smooth. Moderate easterly swell.

SHIPS' NAMES.	Warrior.	Achilles.	Defence.	Royal Oak.	Pallas.	Minotaur.	Prince Consort.	Bellerophon.
	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>	<i>Yards.</i>
Warrior - - - - -	-	6,853+	8,166+	11,062+	11,472+	13,783+	14,498+	15,287+
Achilles - - - - -	6,853—	-	1,313+	4,209+	4,619+	6,930+	7,645+	8,434+
Defence - - - - -	8,166—	1,313—	-	2,896+	3,306+	5,617+	6,332+	7,121+
Royal Oak - - - - -	11,062—	4,209—	2,896—	-	410+	2,721+	3,436+	4,225+
Pallas - - - - -	11,472—	4,619—	3,306—	410—	-	2,311+	3,026+	3,815+
Minotaur - - - - -	13,783—	6,930—	5,617—	2,721—	2,721—	-	715+	1,504+
Prince Consort - - - - -	14,498—	7,645—	6,332—	3,436—	3,026—	715—	-	789+
Bellerophon - - - - -	15,287—	8,434—	7,121—	4,225—	3,815—	1,504—	789—	-

Ships under all plain sail. Royals taken in occasionally. The screws of "Warrior" and "Defence" were raised; screws of the other ships disconnected, and occasionally revolving. All the ships forereached considerably on "Pallas."

"Bellerophon" missed stays twice; no other ship missed stays at all.

On the first occasion the "Royal Oak" missed stays once, and was the only ship which did so; on the second occasion the "Bellerophon" missed stays twice, and was the only ship doing so.

9. On the return passage the "Royal Oak" and "Prince Consort" were running so short of fuel as to render it advisable to save coal by towing them.

Accordingly on the 3rd July, at 7 a.m., the "Achilles" took the "Prince Consort," and the "Warrior" the "Royal Oak" in tow, and towed them until noon on the following day.

The result of this proceeding, calculating the previous day's expenditure of the four ships, and the increased expenditure on board the towing ships, was a total saving of 60 tons of coal, and the two towed ships of course placed one day's run nearer their port.

This experiment was useful as well as profitable, for there can be little doubt, in the event of a war, our iron-clad squadrons, in consequence of their small stowage of fuel, will have to seek distant destinations in tow of each other.

10. The fine weather which we have experienced is no doubt also connected with the large amount of good health enjoyed by the squadron, which is quite noteworthy, as on no occasion during the last five weeks has the number of sick, including those left behind in hospital, reached as much as 5 per cent. in a force of 4,500 men.

11. Having thus given a general sketch of our proceedings, I come to the more specific points mentioned in their Lordships' instructions, taking them in the order in which they stand.

12. The first point is the handiness of the respective classes of ships for an attack on an enemy's fleet, and what class of ship presents the greatest advantage for ensuring speedy evolutions by ramming or otherwise.

The ships of the squadron may be divided into four classes, viz. :—

1. "Minotaur," "Warrior," and "Achilles."
2. "Prince Consort" and "Royal Oak."
3. "Pallas" and "Defence."
4. "Bellerophon."

Of all these the "Bellerophon" is the readiest and most easily handled under steam, and she has the most powerful battery under the thickest armour.

Under sail she is slow, and stows a small quantity of fuel, but is very economical in expenditure.

Her principal defects as a fighting ship I consider to be, that the guns in her battery are placed too close together; the absence of upper deck armament, and the want of fire in the line of keel, under armour, as well as the inefficiency of the bow-gun, which is on the main deck.

I do not believe that in chase of an enemy's ship she could, by any possibility, fire her bow-gun, the projecting bow helping the sea to roll up to, in, and on her main deck, flooding it, and compelling the closing of the port.

On one occasion, 30th June, when steaming head to wind $5\frac{1}{2}$ knots (force of wind 5), in reply to the signal, "Can you fight bow-gun?" the answer was—"Yes, with closing the port occasionally." The absence of upper deck armament is, I presume, to be accounted for by the fact that the ship, as originally designed, was not intended to have any upper deck, and, as this was an afterthought, it was not prepared to carry guns.

13. The next class to be noticed is the "Prince Consort" and "Royal Oak," and I need not say much as to their merits or otherwise.

They were built to serve a particular purpose, at what was considered a critical period. They were generally viewed as a makeshift, and being merely wooden line-of-battle ships cut down and armoured, they are not likely to be repeated. Nevertheless, they have good qualities; they are armoured throughout, are powerful ships, handy under steam, from being short, with good speed, and do sufficiently well under sail.

Their consumption of fuel is very great; they roll very much, and so deeply, that I am of opinion, now that iron-clad ships are taking the place of wooden line-of-battle ships, it is worthy of all consideration whether it is not advisable to make them coast guard ships, after putting them in a state of thorough repair in every respect; they might then last for years. Under existing circumstances, if they are much at sea, it is not to be expected that they will be worth repair at the expiration of their present commission.

14. I now come to the "Defence" and "Pallas"

The former is a very handy ship under sail, especially with her screw raised, is very economical in her expenditure of fuel, but an indifferent performer under steam.

A proof of it may be found in the fact that on the 30th June, when practising evolutions, force of wind 5, squadron steaming $5\frac{1}{2}$ knots, head to wind, with a slight easterly swell, when she lost her station some little distance, she was utterly unable to regain it, although she was making 54 revolutions by signal. On her trial at the measured mile, in March 1862, 52 revolutions gave her a speed of nine knots, according to the official record.

In fact, she never did get into her place, and the evolution was not completed.

15. As the experiments now taking place on board the "Pallas" are to be made the subject of special report, I need not further advert to them in this place, nor do I think it necessary to say more about that ship, as her qualities are sufficiently well known; and I do not suppose there is the least probability of a second ship of the same class being ever built.

16. The "Minotaur," "Achilles," and "Warrior," are three very noble ships.

The last named, however, I look upon as the least valuable of the three; her unarmoured ends, exposure of steering wheel, her rolling propensities (as compared with the other two), are defects which are not compensated for by any good qualities superior to theirs.

17. The first and second, notwithstanding their great length, which of necessity carries with it some disadvantages, have many great qualities. They steam at high speed; the "Achilles" is, under sail, everything that could be expected in an armoured ship unable to raise her screw; and no doubt the "Minotaur" would do equally well if she were masted in the same way, which I consider she ought to be the first favourable opportunity.

18. The "Minotaur" is more heavily armed than the "Achilles," having four 12-ton 9-inch guns on the main deck (not two, as erroneously stated in Admiral Ryder's Report), and two $6\frac{1}{2}$ -ton guns on the upper deck, which fire in a line with the keel, under the protection of armour, being the only ship in the squadron which possesses this advantage, and is armoured throughout, having $5\frac{1}{2}$ -inch plates, tapering to $3\frac{1}{2}$ inches (and not plates of $4\frac{1}{2}$ inches, as erroneously stated in Admiral Ryder's Report).

19. These are great advantages over a ship in other respects so nearly alike, but in the great and all-important point of the capacity for fighting their guns, they are both alike, rolling as nearly as possible to the same extent, which is a minimum as compared with other ships; and in this respect of steadiness of platform upon which to fight their guns, I believe they stand out unrivalled and unsurpassed by any ship which has ever been built.

20. Believing, as I do, that this invaluable property of steadiness is due to the form of the ships, and the proper distribution of the weights on board them, and not to be attributed to their great length, this question has constantly forced itself on my mind; viz.:

Is it not possible to build a broadside ship, heavily armed, adequately protected, of such a length as to secure sufficient speed, and to be at the same time a handy ship, and of such a shape and form as to roll as little as the "Minotaur" and "Achilles"?

Unless this question can be answered positively in negative, I have a full conviction that it ought to be attempted, so long as broadside ships continue the most important and formidable part of our navy.

21. My own idea of the proper theory of iron-clad ships is this, that they should always be built of iron, be armoured throughout, be as heavily armed as possible, and possess bow and stern fire, at least to the same extent as the "Lord Warden" and "Lord Clyde."

22. Perhaps the time has arrived when the enormous increase which has taken place in the power of artillery, and the increased weight and thickness of the

the armour plates, which have become necessary to resist the projectiles now in use, render the carrying out of this theory of iron-clad ships impracticable.

If this be so it would seem to follow that if guns are to be used of such a weight, that the whole length of the broadside cannot be made use of to carry them, and the space which they occupy is too great to admit of their being protected by a thickness of armour capable of resisting the shot which will be brought against them, it seems to follow, I say, that the turret ship is a necessity.

23. Guns of any weight can be placed in turrets, armour of almost any thickness can be carried round them, and it will then only be necessary to protect the water-line with a belt, as heavy and as thick as the ship can bear. These conditions carried out, it remains, of course, that the turret ship should be constructed so that she should be a habitable and comfortable ship for the officers and men, with a sufficiency of sail power to enable her to meet the varied requirements which are usually made on a British man-of-war.

The question again naturally arises, "Is it impossible to build such a ship?"

The conditions above stated, which seem to render a resort to turret ships inevitable, seem also to point out that, in the broadside ship, armour plating will eventually have to be given up everywhere, except at the water-line and at the bow and stern, to protect guns firing in a line with the keel.

In ships built completely of iron, with guns as heavy as they are capable of carrying, protection must be reduced to a minimum, and shot and shell be allowed to find their way through and through the iron fabric, perhaps with less damage to ship and life than if they had been checked in their progress by armour plating.

24. The subject of "ramming" I approach with great diffidence.

It is one which exists principally in the region of speculation. I am not one of those who think that in the next naval war ramming will rank before artillery as a mode of attack; but I believe firmly that it will play a very important and formidable part in all future engagements.

Possibly some naval actions will be decided by the independent and energetic action of some individual captain seizing the fortunate moment and the right opportunity for running his enemy down at a high speed.

25. It is as clear as anything can be that so long as a ship has good way on her, and a good command of steam to increase her steam at pleasure, that ship cannot be what is called "rammed": she cannot even be struck to any purpose so long as she has room and is properly handled.

26. The use of ships as rams, it appears to me, will only be called into play after an action has commenced, when ships, of necessity, are reduced to a low rate of speed, probably their lowest. I therefore apprehend that it would be consistent with prudence and good tactics always, when going into action, to hold in reserve a portion of the squadron or fleet (and that whether the force was large or small, whether the enemy were numerically superior or otherwise) to act as rams; and when the action had commenced, and noise and smoke and fire were doing their work, the reserve to be brought into play, to act independently, as circumstances might require.

27. For this purpose ships must be made capable of playing their part, and strengthened on purpose to perform such duty; and the form of bow which I believe best calculated to deal the hardest blow, and carry with it the greatest amount of destruction, is the straight upright stem of the "Achilles," or the slightly curved one of the "Minotaur," rather than the projecting prow of the "Bellerophon," and others of a similar form. The result of the experience gained when the "Amazon" "rammed" a small steamer in the channel, is not encouraging.

29. I believe also on this subject, as well as on very many others connected with naval warfare, that the first great action which takes place at sea between iron-clad squadrons or fleets, will dissipate and cast to the winds many of our pre-conceived opinions and theories, disturb many of our prejudices, and throw an entirely new light on the whole subject.

30. The only remaining subject of their Lordships' instructions to be noticed, is the running-in and out-gear, and training gear to the carriages and slides.

There are two gun-carriages and slides on board this ship, fitted with Cunningham's running-in and out-gear, one to the 12-ton gun, which has the training gear with fixed winches, and the other to the 6½-ton gun from the "Excellent," which is an adaptation of Cunningham's invention, with the addition of a gun-tackle purchase for training; and in point of fact the two are one and the same thing.

The first mentioned is what Cunningham calls his V wheel system, and the other is a mere copy, with slight modifications in the shape of the wheel, and the position of the bollards.

They are, however, practically the same thing, the one from the "Excellent" being the better fitted of the two, which is to be accounted for by the fact that the 12-ton gun was fitted at Mr. Cunningham's expense, and the other at the expense of the Government.

The trials which have been made with this running-in and out-gear have been highly satisfactory; and I recommend that it be adopted at once throughout the service for the 7 and 8-inch guns. Captain Goodenough approves of it so much that he is of opinion that it should be adopted also for the 9-inch gun; and I see no good reason for dissenting from that opinion.

If the modification of Cunningham's plan, as emanating from the "Excellent," should be adopted, I wish to express my opinion that, in justice to Mr. Cunningham, it should always retain his name, and not be merged in the universal name of "Service Running-in and Out-gear." Simple justice, I think, demands this.

The training gear fitted to the guns, being the same as last year, and fully reported on then, requires no further comment.

31. There will accompany this report diagrams of the sailing trials, and copies of the five rolling returns made by signal, which embody almost all that can be learnt from the rolling returns, which contain hourly observations. These are so voluminous, and take so much time and labour even to make an abstract of, that I submit for the future they should be discontinued, except where ordered to be filled up by signal, or the state of the weather renders such a return important or necessary.

32. The reports of Admiral Ryder and the captains of the squadron will also be sent herewith. I have not been able to give these documents the careful perusal and attention which they deserve, the greater part of them having been sent in very lately, and two reached my hands only this morning.

I had intended to have collated and made a digest of the contents of the captains' reports, before forwarding them, and appended it to this Report, in order to have given greater prominence to the more salient and important parts of them, but I am unable to do so, having received an intimation that an early reception of all the reports is very desirable, and that they should be in office not later than the 13th instant.

This circumstance must also plead my excuse for any shortcomings in this Report, which has not had the time and care bestowed upon its preparation which I intended it should have had.

I have, &c.
(signed) *Fred. Warden*,
Rear Admiral Commanding.

The Secretary of the Admiralty.

SCHEDULE of LETTERS and COMMUNICATIONS sent by Rear Admiral *Frederick Warden*, C.B., to the Secretary of the Admiralty, on the 11th July 1868.

No.	Subject of Letter.	Page.
1	Report on the Cruise of the Channel Squadron, from Rear Admiral Ryder - - -	9
2	Ditto - - from Captain MacDonald, H.M.S. Bellerophon - - -	27
3	Ditto - - from Captain Goodenough, H.M.S. Minotaur - - -	28
4	Ditto - - from Captain Hillyar, H.M.S. Royal Oak - - -	33
5	Ditto - - from Captain Vansittart, H.M.S. Achilles - - -	34
6	Ditto - - from Captain Boys, H.M.S. Warrior - - -	37
7	Ditto - - from Captain May, H.M.S. Defence - - -	39
8	Ditto - - from Captain Armytage, H.M.S. Prince Consort - - -	42
9	Ditto - - from Captain Lambert, H.M.S. Pallas - - -	43
10	Rolling Returns as taken by signal.	

Enclosure No. 1 in Admiral *Warden's* Letter, No. 170, of 11th July 1868.

REPORT from Rear Admiral *Ryder* on the Cruise of the Channel Squadron, June 1868.

Sir, "Bellerophon," in Plymouth Sound, 7th July 1868.

1. IN compliance with your letter of instructions, dated the 3rd ultimo, directing me to pay special attention to certain points, and to report to you in duplicate at the conclusion of the cruise, I have the honour to report as follows:—

First paragraph in your letter:—

"I request you to pay special attention to the following points, viz.:—

"1st. As to the general handiness of the several classes of ships composing the squadron, and which class, in your opinion, presents the greatest advantages for ensuring speedy evolutions, and for giving effect to ramming or otherwise."

2. In reply, I beg to state that I presume that the ships can only be divided into two classes, viz., the long class and the short class, although the "Bellerophon," in right of her length, occupies rather an intermediate position.

Long Class.				Short Class.			
Minotaur	-	-	400 feet.	Bellerophon	-	-	300 feet.
Warrior	-	-	380 "	Prince Consort	-	-	273 "
Achilles	-	-	380 "	Royal Oak	-	-	273 "
				Defence	-	-	280 "
				Pallas, a much smaller ship, only joined after the cruise was nearly over.			

3. I assume that the evolutions referred to may be divided into evolutions under sail alone (a), and under steam alone (b).

(a.) General handiness and insurance of speedy evolutions under sail alone.

There can, in my opinion, be no doubt but that, as a general rule, the short class has and must have the advantage, as regards handiness under sail alone, over the long class, provided they have sail enough, and have no speciality in their lines or in the position of their masts which tends to impair their handiness.

4. To a certain extent, general handiness, and to a great extent the insurance of speedy evolutions, must depend upon the speed of the ships under sail alone. The speed of the ships under sail alone was tested by two trials of sailing, chasing to windward, the diagrams of which are appended.

Enclosures Nos. 1 and 2.

300.

B

It

It will be seen that the "Bellerophon" was the slowest of the eight ships on that point of sailing, viz., on a wind under all plain sail.

5. The ships were frequently (in fact, every night) under sail alone on a wind, and the quantity of sail that was found to be necessary to enable the ships to keep station was, to a certain extent, a measure of their relative merits on a wind.

Taking into consideration the results of the two trials, and the general comparison of the sail required for station-keeping, the order of merit for speed on a wind under all plain sail is, I consider, as follows :—

NAMES.	Yards.	REMARKS.
Warrior - - - - -	20,000	The entries in column 2 are the results of two trials, one of which lasted seven hours, and the other four hours, together 11 hours, and the total gain dead to windward on the "Bellerophon" is given in yards.
Defence - - - - -	13,000	
Achilles - - - - -	11,000	
Royal Oak - - - - -	6,000	
Prince Consort - - - - -	4,000	
Minotaur - - - - -	3,000	
Bellerophon - - - - -	—	

The "Bellerophon" is certainly not a fast ship under sail alone, but general handiness under sail alone may perhaps be more safely measured by (1) the frequency with which ships miss stays; (2) the frequency with which they require to be boxed off owing to their coming up in the wind against their helms; (3) the frequency with which they refuse to pay off when an alteration of course is ordered; (4) the distance and time occupied in wearing, &c.

Taking a general view of the ships under this head, I consider that the

Royal Oak	-	-	-	-	} are the handiest under sail alone.
Prince Consort	-	-	-	-	
Defence	-	-	-	-	
Warrior	-	-	-	-	} less handy.
Achilles	-	-	-	-	

Note.—The Warrior off the wind blowing fresh, is, I am informed, very unmanageable, especially if her screw is down.

Bellerophon	-	-	-	-	} least handy.
Minotaur	-	-	-	-	

Both these ships might have their sail area increased with advantage.

Note 1. The "Warrior" and "Defence" were able to raise their screws; the "Bellerophon" never had way enough even to turn hers; it requires a speed of five or six knots to make her two-bladed screw revolve; the four-bladed screws probably revolve much more easily.

Note 2. Under certain circumstances, viz., when there is a heavy bow or quarter swell, the prolonged stem, and the overhanging stern of the "Bellerophon" affect injuriously her behaviour under sail alone.

(b.) General handiness and insurance of speedy evolutions under steam alone.

6. There can, in my opinion, be no doubt that, as a general rule, the short class has and must have the advantage, as regards general handiness under steam alone, over the long class; the time occupied and the space passed over when making circles is a sufficient proof of this (see official records of which the following

following Table is an extract); and the performances of the ships at sea correspond fairly with those recorded at the official trials :—

NAMES.	Mean Diameter of Circle.	Time (Mean).	
		Min.	Sec.
Bellerophon - - - - -	620	4	10
Minotaur - - - - -	1171	7	38
Achilles - - - - -	1117	7	15
Warrior - - - - -	1564	10	6

7. As under sail alone, so under steam alone, general handiness must, to a certain extent, and the insurance of speedy evolutions must, to a great extent, depend upon the speed of the ships.

Comparing the speeds at the measured mile, the long class of ships has the greater speed by about two knots; the long class may be said to average 14 knots, and the short class 12 knots; the Bellerophon's maximum speed is over 13 knots.

8. There has been no trial of speed under steam alone during the cruise, but the trials at the measured mile give the maximum speeds of the ships. In the open sea, and especially when ships are being forced against a head swell, the long class of ships show to much greater advantage, when compared with the short class (with the exception of the "Bellerophon"), than any comparison between their maximum speeds at the measured mile would lead one to anticipate. The only test of this is the consumption of fuel on days when we were steaming steadily and not evolutionizing, and there was a head sea.

9. For remarkable economy of fuel of the "Bellerophon" under these circumstances, *see* margin.

Friday, 3 July.
24 hours.

	Tons.
Minotaur -	51.16
Prince Consort -	46.0
Warrior -	45.0
Achilles -	41.4
Royal Oak -	39.8
Defence -	31.0
Bellerophon -	31.0

10. The "Bellerophon" appears, as I have said before, to occupy a middle position between the two classes as to speed, and she turns in the narrowest circle and shortest time.

I place her highest in the order of merit under this heading of general handiness and insurance of speedy evolutions under steam alone.

11. Balanced Rudder.—There is no doubt but that the "Bellerophon's" large surfaced balanced rudder contributes considerably to her general handiness under steam alone, and this is specially seen when a berth is being taken up in harbour. The advantages of a balanced rudder to a vessel under sail alone are very doubtful if the screw does not revolve.

12. (c.) What class in your opinion presents the greatest advantage for giving effect to ramming or otherwise?

13. There can, in my opinion, be no doubt but that, as a general rule, the short class must amongst broadside ships have the advantage over the long class for giving effect to ramming, and also, but to a less extent, for escaping from being rammed, and for the following reasons :—

14. *N.B.*—Speed and weight are no doubt of great importance in ramming, but both classes have speed enough and weight enough for the purpose. Great speed would be of more importance when endeavouring to escape from a blow, and in this respect the long class has an undoubted advantage.

(1.) The short class is the handiest, and is therefore more likely

(a) to hit the enemy if she is moving;

500.

B 2

(b) to

- (b) to hit that part of her which it is desired to penetrate;
- (c) to hit her at about the desired angle, so as to injure our own stem as little as possible;
- (d) to minimize the wrenching strain on her stem, as this short class is more easily turned.

(2.) The short class for the same reason (viz., superior handiness) is more likely to succeed

- (a) in turning, so as to avoid a blow altogether;
- (b) in receiving the blow where it would be least dangerous;
- (c) in receiving the blow at an angle which would reduce the injury to a minimum.

(3.) The short class has also, as compared with the long class, the merit *quâ* ramming of exposing a smaller mark to aim at.

15. The "Bellerophon" is, except the "Pallas," the only ship here present which has the peculiar fore-body combining full U sections carried well forward, and the so-called eperon.

The shape of the fore-body (I am informed, for I have had no opportunity of seeing it) results, in the "Bellerophon," in raising, after she has reached a speed of eight or nine knots, a bow wave, which increases in height with the speed, until at full speed (nearly 14 knots) it reaches to over eight feet in height.

* See No. 3 Appendix for suggestions for ascertaining the amount of this loss.

16. It is not easy to believe that this enormous mass of water can be set in motion without absorbing some portion of the power of the engines,* and causing therefore an extra cost in fuel; but, when we consider, apart from the cost, the special question of ramming, there would appear to be possibly a peculiar advantage in this bow wave which would not only act as a shield, and deflect upwards, shot from a ship ahead or on either bow, but might also have the following effect, seeing that it only precedes the "Bellerophon" by a few feet, viz., to list over the ship that is being rammed, and thus expose a weaker portion than the water-line, viz., at or near the lower edges of the plates; this, by letting the eperon of the "Bellerophon" be forced into the enemy's interior through a part of the outer fabric where there was least resistance, would enable it to reach further and make a larger hole, and at the same time diminish the wrenching lateral action on the "Bellerophon's" prow, caused by the forward motion of the enemy; which, had the eperon entered through the centre of the plates and backing, might have so injured it and her as to at all events prevent her ramming again with effect during the same action. If this possible advantage of the bow wave is worthy of consideration, and if any further ships are to have similar fore-bodies and eperons, the shape and strength of the eperon should be specially viewed with reference to the enormous vertical pressure downwards which would be exerted on it by the enemy when the bow wave that listed her had subsided, which would be the case immediately after the blow.

Note.—The prolongation of the stem to the extent to which this is carried in the "Bellerophon" interferes very much with the rapid working of the cables, as the cable is frequently found to be over the stem; and the delay thus caused when comparing the anchor work of the "Bellerophon" with the anchor work of the "Minotaur" is still more increased, owing to the former not having, as the latter has, a steam capstan. The "Bellerophon" has an ordinary capstan, and owing to the battery a very short drift for the cables; steam capstans should, I submit, be fitted to all vessels over 3,000 tons.

17. I have ventured, at the risk of being wearisome, to write at some length on the subject of ramming, because I felt that I could not otherwise justify my decided preference *quâ* ramming for the "Bellerophon," as compared with the "Minotaur," the "Warrior," and the "Achilles."

Great speed and great momentum, arising from great weight, the recommendations *quâ* ramming of the long class, are ample in the "Bellerophon," and any

any more momentum than is necessary to pierce to a vital point only tends to more seriously injure the bow of the rammer.

18. I may here observe that I obtained from Paris, just before starting, the most recent books published by French naval officers on tactics, rolling, &c., and have been much impressed with the evident intention of the French navy to trust their fate in the next naval war almost entirely to ramming. Whether we may prefer or not this method of attack, we must evidently be prepared for it. The supplementary evolutions by "*pelotons*," proposed by Admiral Count Bouet Willaumez, appear to be intentionally designed for ramming. The three vessels composing a "*peloton*" will no doubt specially aid one another in ramming and in evading ramming by distracting the attention of a rammer. We have not as yet adopted this formation.

19. Second Paragraph.—"*The general capability of the 'Bellerophon' for fighting her guns in a sea-way, as compared with the other ships.*"—In reply I beg to state generally that I am of opinion that the "*Bellerophon*" was perfectly able to fight her guns in any weather and sea we have experienced during the cruise, not excepting the 23rd June, when the fleet was under double-reefed topsails, and there was the usual sea and swell. The "*Bellerophon*" was heeling over to 6°; the battery ports to windward and to leeward were carefully watched, but the run did not reach them.

20. The capabilities of ships for fighting their guns in a sea-way depend, in my opinion, upon several considerations; amongst others, on

I. *The rapidity of their rolling or heeling motion, which is a measure of steadiness (a);* which may be so quick as to prevent accurate firing, owing to the short time that the object is on with the points of sight, although the maximum angle of inclination may never be large; or (*b*) may be so slow as not to bring the object on during the short time it may be (as the ship turns) in line with the points of sight as regards direction.

II. *The ordinary angle of inclination from the perpendicular, which is a measure of stability,* may be so large at each heel that the guns can only bear on the object occasionally, leaving the enemy's hull for a greater or less portion of each roll or heel above or below any possible elevation or depression of the guns.

21. III. *The height of the port sills above the water.*—I propose to compare the ships present under these three other headings (*see Table I.*)

TABLE 1.—Giving, as indicated by Signal, the Number of Oscillations in One Minute, the Mean Angle of Oscillations in Five Minutes, and the Maximum Angles in Five Minutes.

Date.	Time.	Wind.	Sail.	Steam.	Speed.	Swell.		Minotaur.			Royal Oak.			Warrior.			Prince Consort.			Bellerophon.			Achilles.			Defence.			Pallas.			REMARKS.
						Direction.	Amount.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	Number.	Mean.	Maximum.	
8 June	A.M. 8.55	5	Plain	-	<i>Knots.</i> 5	Starboard quarter.	Moderate	8.8	1.	5.	15.	7.4	11.	5.	2.5	4.	12.	4.	10.	11.	1.6	2.5	6.	2.5	3.5	5.	6.5	8.2	-	-	-	The Achilles corrected her signal on 3rd July.
10 "	10.0	1	0	Steaming	0	Port beam	Moderate	7.	1.3	4.	14.	6.	15.	10.	5.5	6.5	-	-	-	7.	2.2	3.	1.2	2.5	12.	5.	6.	-	-	-		
11 "	11.0	0	0	Steaming	6	Starboard bow.	Consider- able.	8.	2.	4.	13.	15.5	21.	9.	11.	7.5	5.5 ? 11.	7.	9.	4.5 ? 9.	4.1	4.4	8.	2.9	3.	5.	6.	22.	-	-	-	
12 "	11.0	0	Plain	-	0	Beam	Moderate	7.2	1.5	3.	13.	10. S. 12. P. 22.	-	9.5	2.2	3.	13.	10.	12.	11.	1.5	2.5	6.	0.7	1.5	5.	4.5	6.5	-	-	-	
22 "	11.24	2	0	Steaming	5	Port bow	Slight -	8.5	0.9	1.	11.	10.5	15.	10.	1.75	2.	12.	7.	16.	9.	4.	1.5	7.	1.	2.	6.	5.	6.	12	9	12	
A. Mean Number of Oscillations in One Minute						-	-	7.9	-	-	13.2	-	-	9.7	-	-	12.1	-	-	9.6	-	-	7.	-	-	10.8	-	12	-	-	-	
B. Mean of Mean Angles in Five Minutes						-	-	-	1.4	-	-	12.3	-	-	4.6	-	-	-	7.0	-	1.9	-	-	1.7	-	5.4	-	-	9	-	-	
C. Mean of Maximum Angles in Five Minutes						-	-	-	-	3.4	-	-	15.5	-	-	4.6	-	-	11.8	-	-	2.8	-	-	2.4	-	9.7	-	-	12	-	-

Table I. is a copy of the signal record, and has been compared with the Flag Ship's Signal Book.

22. It will be seen that there is in some cases a second entry with a ?, as for instance in "Warrior's" number of oscillations on 10th June, and "Defence's" on the 8th, 11th, 12th, and 22nd June.

23. There was evidently some misapprehension on board some of the ships as to whether in measuring the number of rolls or heels, they were to count each single oscillation from starboard to port as 1', or the double oscillation as 1'.

24. As, however, there is in each ship a general approach to equality in the number of oscillations said to be made in the same given time, under all ordinary circumstances we are enabled to assume that the entries made with a ? are the real number of oscillations.

25. In the case of the "Defence," I frequently noted her number of oscillations, and found that from 10' to 11' was the number, which justifies me in adopting the entries marked ? as correct.

26. (1) The rapidity of rolling or heeling motion, which is a measure of steadiness.

This may be ascertained by multiplying together the entries in columns 1 and 2, and arranging them in a separate table.—See Table II.

TABLE II.—Showing the relative *Steadiness* of the Ships, as ascertained by multiplying together the Figures in the First and Second Columns of Table I., the Result being the Number of Degrees of Oscillation in One Minute.

Date.	Time.	Wind.	Sail.	Stenn.	Speed in Knots.	Swell.		Minotaur.	Royal Oak.	Warrior.	Prince Consort.	Bellerophon.	Achilles.	Defence.	Pallas.
						Direction.	Amount.								
June 8 -	A. M. 8.55	5	Plain	- -	5	Starboard quarter.	Moderate	8.8	111.0	12.5 ? 25.	48.0	17.6	15.	32.5 ? 65.	-
June 10 -	10	1	0	Steaming -	? 6	Port beam	Moderate	12.6	84.	55.	-	15.	9.6	60.	-
June 11 -	11	0	0	Steaming -	6	Starboard bow.	Considerable	16.	201.	99.	38.5 ? 77.	18.4 ? 36.9	23.2	30. ? 60.	-
June 12 -	11	0	Plain	- -	0	Beam	Moderate	10.8	286.	20.9	103.	16.5	4.2	22.5 ? 45.	-
June 22 -	11.24	2	0	Steaming -	5	Port bow	Slight	7.6	115.	17.5	-	3.6	7.0	30. ? 60.	108.
Mean Angle of Oscillations								11.2	159.4	43.4	76.	17.9	11.8	58.	108.

27. From Table II. we can place the ships in their order of merit, *quâ steadiness*.

Steadiness or otherwise.	NAMES.	Number of Degrees of Oscillation in One Minute.	Portion of Time in Oscillating through One Degree.
Very steady	Minotaur	11 2	6 seconds.
	Achilles	11 8	4 "
	Bellerophon	17 9	4 "
Steady	Warrior	43 4	1 1/2 "
Unsteady	Defence	58 0	1 "
	Prince Consort	76 0	2 "
Very unsteady	Pallas	108 0	1 1/2 "
	Royal Oak	159 4	3 "

28. II. *The Angle of Inclination from the Perpendicular, which is a Measure of Stability.*

I am of opinion that there is room for improvement in the method of noting and recording the rolling and heeling observations.—See Suggestions on this head, Appendix III.

29. The *mean* angles of inclination from the perpendicular when heeling cannot be ascertained from the present returns; but (*see* the lower horizontal columns in Table I.) we can ascertain—

First, The mean number of oscillations made by each ship in one minute, on each occasion of observation, and also what was in each ship the general or average mean number of oscillations made in a minute (*see* horizontal Column A.), and which are as follows :—

TABLE IV.

NAMES.	Average Mean Number of Oscillations in One Minute.	Extreme Number of Oscillations in One Minute.	REMARKS.
Achilles - - - - -	7·	6-8	It has been assumed (I am informed) that, under all ordinary circumstances, each ship makes the same number of oscillations in a minute, whatever difference may occur in the angle. This is not borne out entirely by the Table; a different form for noting the rolling and heeling will, I believe, increase the accuracy of the Returns. We noticed in the Bellerophon that when the motion was greatest, 8·4 was about the average number of oscillations in a minute; the extremes, 7 and 11, were observed when the motion was least.
Minotaur - - - - -	7·9	7-88	
Bellerophon - - - - -	9·6	7-11	
Warrior - - - - -	9·7	9·5-10	
Defence - - - - -	10·8	10-12	
Pallas - - - - -	12·	12·	
Prince Consort - - - - -	12·1	11-13	
Royal Oak - - - - -	13·2	11-15	

30. We can also from Table I. from the mean number of degrees in each angle of oscillation passed through by each ship on each occasion of observation, ascertain the *general or average mean number of degrees each ship passed through in each oscillation.*—See horizontal Column B in Table I., which is as follows :—

TABLE V.

NAMES.	Average Mean Number of Degrees passed through in each Oscillation.	NAMES.	Average Mean Number of Degrees passed through in each Oscillation.
	<i>Degrees.</i>		<i>Degrees.</i>
Minotaur - - - - -	1·4	Defence - - - - -	5·4
Achilles - - - - -	1·7	Prince Consort - - - - -	7·0
Bellerophon - - - - -	1·9	Pallas - - - - -	9·0
Warrior - - - - -	4·6	Royal Oak - - - - -	12·3

31. We can also from Table I. from the *maximum angles of oscillations passed through by each ship on each occasion of observation*, ascertain the *general or average maximum angle of inclination* of each ship.—See Column C, Table I., which is as follows :—

TABLE VI.

NAMES.	Average Mean Number of Degrees in Maximum Angle of Oscillation.	NAMES.	Average Mean Number of Degrees in Maximum Angle of Oscillation.
	<i>Degrees.</i>		<i>Degrees.</i>
Achilles - - - - -	2·4	Defence - - - - -	9·7
Bellerophon - - - - -	2·8	Prince Consort - - - - -	11·8
Minotaur - - - - -	3·4	Pallas - - - - -	12·0
Warrior - - - - -	4·6	Royal Oak - - - - -	15·5

32. III. *The Height of the Port Sills of the Main Deck Battery above the Water.*

33. I am informed that in the Channel Fleet a few years since the ships were marked amidships on a vertical line at foot intervals, so as to show at sea the height of the crest of the wave above the ordinary water-line and below the port sills; this is not done now.

34. The height to which the same wave will rise on the side of several vessels above their ordinary water lines will, I suppose, *cæteris paribus*, depend upon and vary with their displacements. A height of port which in one vessel is far above the run of the waves, will often, in a vessel of more displacement exposed to the same waves (both vessels being upright) bring the ports within the run of the waves.

35. In the following Table VII., I have arranged the ships in the order of the height of their port sills above the water line, viz., that which was recorded or estimated before leaving harbour on this cruise, and on the supposition that all the ships are exposed to waves which would just touch the "Minotaur's" port sill. I have calculated on the assumption that the height of the wave on the ship's side varies exactly with the displacement, how high the same wave would rise on each of the other ships.

36. I have ascertained the difference between this height and the height of each ship's port sill above the ordinary water line, and if the height the wave rises to is less than the height of the port sill, as it is in each case, I have called the difference +, and considered that this is the distance of the crest of the wave below the port sill, and have concluded that this is the real measure of the merit of each ship, *quâ height of port sill above the sea.*

TABLE VII.

NAMES.	Height of Port Sill above Water Line in Harbour.		Displacement.	Corresponding Height of Crest of same Wave on each Ship's Side above the ordinary Water Line.		Depth of Crest of Wave, which would just touch "Minotaur's" Port Sills below other Ship's Port Sills.
	Ft.	In.		Ft.	In.	
Minotaur - - - - -	9	6	9,999	9	6	0 0
Warrior - - - - -	9	6	8,852	8	7	+ 0 11
Achilles - - - - -	9	4	9,487	9	3	+ 0 1
Bellerophon - - - - -	8	9	7,119	6	9	+ 2 0
Royal Oak - - - - -	8	9	6,416	6	3	+ 2 6
Prince Consort - - - - -	8	0	6,700	6	4	+ 1 8
Defence - - - - -	7	6	5,971	5	8	+ 1 10

37. From Table VII. we are enabled to arrange the ships in order of merit *quâ height of port sill* above the crest of the waves, as follows :—

TABLE VIII.

NAMES.	Depth of Crest of Waves, which would just touch Minotaur's Port Sill below other Ship's Port Sills.		NAMES.	Depth of Crest of Waves, which would just touch Minotaur's Port Sill below other Ship's Port Sills.	
	Ft.	In.		Ft.	In.
Royal Oak - - - - -	2	6	Warrior - - - - -		0 11
Bellerophon - - - - -	2	0	Achilles - - - - -		0 1
Defence - - - - -	1	10	Minotaur - - - - -		0 0
Prince Consort - - - - -	1	8			

The "Royal Oak" by her extravagant unsteadiness, as shown by the degrees oscillated through, and her large mean and maximum angles of oscillation, gains little or nothing by her position at the head of the order of merit, *quâ* height of port sill in Table VIII.

38. The "Bellerophon," on the contrary, with practically two feet greater height of port sill than "Minotaur" and "Achilles," and (*see* Tables II., III., IV., V., VI.) with a steadiness and stability practically almost equal to theirs, takes in eight of her port sill heights, a much higher place than they do in the scale of *capability for fighting her broadside guns in a seaway*, and I place her at the head of the list.

39. As regards *fighting bow and stern guns in a seaway*, much must depend upon the speed of the ship at the time.

The "Bellerophon" has no fittings for fighting bow and stern guns on her *upper deck*. (The two bow guns on the main deck are placed behind armour.)

I took particular notice of these bow ports when the ship was proceeding at between five and six knots against an ordinary Atlantic swell, weather quite fine. And observed that occasionally a sea rose above the lower port sill; but there would not have been sufficient water shipped to have interfered materially with the guns being fought.

40. I have compared, as I have been directed to do (under certain heads), the merits of the various classes of ships composing the Channel squadron of this year, and I have been led to the conclusion, that whilst the *short class* has the advantage over the *long class*,

1st. In general *handiness* (a) under sail alone; (b) under steam alone;

2nd. In ensuring the performance of speedy evolutions (a) under sail alone, if the speed of the evolution depends mainly upon rapid turning, as is often the case; (b) under steam alone if the speed of the evolution depends upon rapid turning, as is often the case.

3rd. In giving effect to that portion of ramming or otherwise which depends upon handiness as distinguished from speed;

4th. In capability for fighting guns in a seaway, as far as regards height of port sill above the water line;

41. *The long class has the advantage over the short class.*

(1.) As regards maximum speed.

(2.) As regards stowage of fuel.

(3.) In ensuring the performance of speedy evolutions under sail alone and under steam alone, if the speed of the evolution depends mainly upon the speed of ships.

(4.) In giving effect to that portion of ramming which depends mainly upon the speed of the rammer; and also

(5.) In giving that portion of effect to ramming which depends upon the momentum of the rammer.

42. (6.) In capability of fighting guns in a seaway, as regards steadiness and stability, the "Bellerophon," while she possesses in the highest degree the most important advantages claimed above for the short class, except great handiness under sail alone, is inferior to the long class only in the following points, *viz.* :—

(1.) Speed under sail alone.

(2.) Very slightly as to maximum speed under steam alone.

Their maximum speed under steam is over 14 knots per hour, her speed is reported to be 13.8.

(3.) Stowage of Fuel.—"Bellerophon's" bunkers will hold only 600 tons, whilst "Warrior," "Achilles," and "Minotaur," carry over 700 tons; but "Bellerophon" has the advantage of superheaters and surface condensers.

43. I cannot at this stage avoid alluding to other qualifications which especially separate and distinguish the "Bellerophon" from both the long and short ships here present.

The "Bellerophon" is the only ship in the fleet that has her—

1. Battery entirely surrounded by 6-inch iron; no other ship present has more than $4\frac{1}{2}$ -inch plates.*

2. An iron belt of 6-inches thickness and about 12 feet in height—6 feet 6 inches below, and 5 feet 6 inches above the water line—throughout at least three-fourths of her length (the belt on the remaining portion being tapered off to about half that thickness).

In no other ship present does the belt exceed $4\frac{1}{2}$ inches thickness.†

(3.) A battery of ten $12\frac{1}{2}$ -ton guns. The "Minotaur" carries two ‡ of these guns. No other ship in the squadron has any.

(4.) The upper deck is composed of $\frac{1}{2}$ -inch steel, and several inches of wood, the main deck $\frac{1}{2}$ -inch steel, and several inches of wood.

44. Those remarkably fine specimens of naval architecture, the "Minotaur," "Warrior," and "Achilles," would probably have remained more or less the models for future ships if the $6\frac{1}{2}$ -ton guns and $4\frac{1}{2}$ -inch plates had remained as the guns and plating of ships. It is the rapid increase in the weight of guns, and in the thickness of the plating that the constructors have been called upon to provide for, which, as it appears to me, necessitated the change in the type of *broadside* ships from the "Achilles" and "Minotaur" to the "Bellerophon." The question as between broadside and turret ship is one on which I have not been asked to form any opinion; but in dwelling, as I have done, on the necessity *quâ* handiness of diminishing, as far as possible, the length of broadside ships, I should wish to make a few remarks on the cupola type, and mention two apparent recommendations which await, of course, the result of experiments, but which as yet, as far as I know, have not yet been alluded to.

45. Assuming for the moment, what is not yet established by actual experiment in sea-going ships, that there is no insuperable difficulty in building large cupola ships of over 4,000 tons that shall be thoroughly efficient sea-going cruising ships in all weathers and climates, with well-ventilated quarters for the crews, and with upper decks for working the ropes and anchors, raised above the encroachment of the waves, and that on these heads no difference remains any longer between the broadside and the cupola type, then it appears to me that we can afford to give to the cupola ships, *cæteris paribus*, a greater proportion of length to breadth than we can afford to give *quâ* handiness or rapid turning power to the broadside ship, viz., because one of the most important reasons why our *broadside* ships should be so constructed as to be as handy as possible (and consequently as short as possible), is, that the guns on one side may, as frequently as possible, and as long a period as possible, be kept bearing on the enemy.

46. Now there is this distinctive feature inherent in the cupola type, viz., that all the guns can be brought to bear on the enemy, and be kept bearing on her for so considerably longer a time than can be effected in the broadside ship, most of whose broadside guns command an angle of 45 degrees only) that rapid turning is not on this account, viz., the bearing of the guns, of nearly the same importance in a cupola ship as it is in a broadside ship; hence it is probable that when the proportion of length to breadth for a cupola ship of, say 4,000 tons and over, is being decided upon, the constructor will give her a greater proportion of length to breadth, more nearly approaching to that of the "Achilles" than to that of the "Bellerophon."

47. (2.) To avoid being rammed during action in which several ships are involved, it will be advisable to keep the ships constantly moving, say at five or six knots as a minimum, and attempting to do this in a *broadside* ship it will be necessary

* Except, as I have since learnt, "Minotaur," which has $5\frac{1}{2}$ tapering to $3\frac{1}{2}$; but this additional thickness is accompanied, I am informed, by an equivalent reduction in the backing.

(signed) A. P. Ryder.

† Except "Minotaur." See previous foot note.

‡ I have since learnt that she carries four of these guns.

necessary, seeing how small is the angle of training of most of the guns,* viz., 45 degrees, to keep the ship constantly and rapidly turning, whereas in the cupola ship this constant rapid turning would be unnecessary, as the guns can be kept on by turning the cupolas.

48. The cupola type, therefore, seems to present, in addition to the numerous apparent recommendations, such as separating the battery, and thus restricting the effect of the enemy's shells, the double broadside, &c.; these two additional recommendations, viz.:

(1.) That a cupola ship may, *cæteris paribus*, be made longer, and can therefore carry more fuel, and

(2.) That in action she can maintain a greater average speed than a *broad-side* ship, and still keep her guns bearing on the enemy.

49. Reserving any more formal expression of opinion as to the comparative merits and demerits of a sea-going cruising cupola ship until we have one in company (and its continued absence is much to be regretted, as that type would appear to have several special recommendations, considering merely the ships here present, and assuming that future ships of the line must have at least ten 12½-ton guns, entirely surrounded by 6-inch plates and a belt of at least six inches of iron), I cannot hesitate in affirming that the "Bellerophon" presents, amongst the ships *here* present (all broadside ships), the best type for the ships of the future; but there are some points in which her type may be improved.

50. (1.) *Fuel*.—The power of carrying a large stock of fuel is so important, that, if by any re-arrangement below, and any slight increase in dimensions which would not affect materially her admirable qualities, room could be found, and displacement provided for that extra 100 tons, which would give bunker room for 700 tons, nothing would be left to be desired in this respect.

51. (2.) *Room in Battery between the Guns*.—The 12½-ton guns are in the "Bellerophon" only 16 feet from centre of gun to centre of gun

In building any other ships of this class more room should be provided, viz., for at least 18 feet between the centres of guns by extending the battery forward and aft; this would, of course, entail an increase in the weight due to the extra plating.

52. (3.) The foremost and after battery guns on each side of the battery should be enabled, as in "Pallas" and "Penelope," to fire as nearly fore and aft as possible (if this method of obtaining a nearly fore and aft fire is found to be satisfactory).

53. (4.) There should be two guns, or one at least, on the fore-castle.

The only guns that can be considered as chase guns in the "Bellerophon" now, are on the main deck behind the breast-plate. When chasing at full speed it would be impossible to use them at all, or to command a view over the bow wave, either from them or from the foremost main deck battery guns, even if these latter could be trained nearly fore and aft.

54. (5.) *Sail Power*.—The sail power should be increased, if possible. The "Bellerophon" is the slowest ship of the squadron under sail alone, and stays with difficulty. I am of opinion that it is very important that ships should for the present, at least, continue to be thoroughly manageable, and have reasonable speed under sail alone.

55. The signalled area of plain sail † was as follows; but I cannot but think that there is a greater difference:—

Warrior	-	-	-	2,720 square yards.	Bellerophon	-	-	2,285 square yards.
Achilles	-	-	-	2,600 "	Royal Oak	-	-	2,264 "
Prince Consort	-	-	-	2,600 "	Defence	-	-	2,246 "
Minotaur	-	-	-	2,556 "				

56. (6.) *Height*

* 16th July.—The training of the "Bellerophon" broadside guns I have since ascertained to be accurately as follows:—30½° forward, 30° aft.

† July 17.—The official record of sail area is, I am informed, as follows:—I have added two columns, showing the number of square yards of canvas to every 100 feet of middle section, by which it appears that, comparing Bellerophon with Achilles, the latter has 757 square yards more, and assuming that area of sail should

56. (6.) *Height of Guns above the Water.*—I have shown that the “Bellerophon” has the advantage of “Minotaur” and “Achilles,” by two feet in respect of port sills above the water line. If it is thought advisable still further to raise the port sill in any future “Bellerophon,” it might, I suggest, be done as follows :—

The “Bellerophon’s” port sills are 8 feet 9 inches above the water; the height in the battery between the beams is 7 feet 6 inches; the floor of the battery might be raised nine inches, still leaving a height in the battery of 6 feet 9 inches; and as the guns will always be fought when at sea parallel to the decks, 12 inches of the lower part of the ports might be filled up with moveable half ports, which would practically add that much to the height of the port sill above the water line; this 12 inches, together with the 9 inches added to the height of the floor of the battery, would raise the lower port sills 1 ft. 9 in., or to 8 ft. 9 in. + 1 ft. 9 in. = 10 ft. 6 in.

57. Third paragraph.—“*As it is necessary that the fullest information be obtained upon the subject of the running in and training gear fitted on board the different ships, I have to direct your particular attention to the subject, and to request that you will offer any suggestions which, in your opinion, would tend to improve the general working of gun carriages and slides.*”

58. My attention has necessarily been confined to the “Bellerophon’s” running in and training gear.

59. I append a description of the slides, showing what variations exist in this ship in the running in and training gear, also a report from the gunnery lieutenant on certain accidents that have taken place, arising more or less from the action of the running in and training gear, and I add my suggestions on these heads.

*See Enclosure,
No. 111.*

60. *Slides, Carriages, &c.*—The carriages, slides, running in and training gear, appear to be on the whole well adapted, the two former to carry, and the two latter to work, these heavy guns. The carriages and slides were removed at Portsmouth, and when the new carriages and slides were received it was found that several new fittings had been attached to them; nine bollards and all the studs have been omitted (they should be fitted at once), several of the new fittings have shown signs of weakness, and some have broken at quarters. I have appended a detailed account of these accidents drawn up by Lieutenant H. Rawson, gunnery lieutenant, and add the following remarks on them. The broken bolts, plates, &c., have been carefully preserved, and it will be seen that in many cases, though by no means in all, extension flaws have existed in the iron.

61. The method of training, running in and out, proposed by Mr. Cunningham, is not fitted to any of the guns on board the “Bellerophon.”

62. The

should vary with middle section, “Achilles” has 503 square yards, or 20 per cent. more than “Bellerophon.” The “Bellerophon’s” dull sailing is evidently due, to a considerable extent, to her small sail power.

NAMES.	Area of Eleven Working Sails.	Middle Section.	Square Yards of Canvas to every 100 Square Feet of Middle Section.	Order.
	<i>Square Yards.</i>	<i>Square Feet.</i>		
Minotaur - - - - -	3,597	1,322	272	1
Achilles - - - - -	3,400	1,312	259	2
Warrior - - - - -	3,201	1,265	253	3
Defence - - - - -	2,494	1,090	229	4
Bellerophon - - - - -	2,643	1,214	218	5
Prince Consort - - - - -	2,495	1,175	212	6
Royal Oak - - - - -	2,335	1,155	202	7

62. The plan of training previously fitted here by winches on the lower deck has been removed. I am unable, therefore, to draw any comparison between these *various* descriptions of training and running in gear.

63. The *new fittings* to the slides and carriages of the 12½-ton guns of the "Bellerophon," are,—

- (1.) The clamps.
- (2.) The bolts connecting the chains to the carriage.
- (3.) Securing bolts on carriage shifted to clamp.
- (4.) Bevelled side wheel training gear.
- (5.) Single running in chain for 7-inch gun.
- (6.) Bollards and studs for easing out.

64. (1.) *Clamps*.—The exercise during this cruise served to show that these clamps should, if they continue to be fitted, be made much stronger. Previous exercise in the "Bellerophon," when sixty-three 43 lb. charges were fired consecutively from one gun, showed no giving of the carriage requiring this fitting, although special experiments, when the gun was fired with extreme elevation and depression, were tried.

65. (2.) *Bolts connecting chains and carriages*.—This new fitting led to a serious accident (*see Report*). There is no doubt but that the man's over zeal and forgetfulness contributed to the accident, but if, as happened in the "Bellerophon," at different guns the bolts break off, and if, as is in accordance with previous experience in this ship, no evil result attended the having the chains unattached by bolts to the carriage, I submit that the patent nipping levers are preferable, and will remove a great source of risk to the men and of damage to the gear in action, especially at night.

66. (3.) *The securing bolts on the sides of the carriage*.—These have frequently broken, from the strain brought upon them by screwing up the securing chain. They should be much stronger, and have a shoulder; they should be more in a line between the trunnion and the bolt in the ship's side, and should in no future case be attached to the new clamps, as has been done in the "Bellerophon."

67. (4.) *Bevelled side wheel training gear*.—This method of fitting the training gear was found to be a decided improvement in some respects. It not only removed the training gear from the rear of the gun where it was too close to the funnel casing, but it removed the men who work it from a position which seriously inconvenienced the captain of the gun when taking aim. The only drawbacks to its use are, that it interferes with the simultaneous working of the right-hand running in winch, and that two contiguous guns cannot with this side wheel be worked at different ships, if the angle between the ships exceeds two points.

68. (5.) *Single running in and out chain for 7-inch guns*.—We were able to compare this with the ordinary running in gear at the opposite gun on the upper deck. When the ship is heeling or rolling, the great purchase of the winch and chain gives this gear a great advantage, especially as the guns are so situated that a preventer rope cannot be worked conveniently.

69. (6.) *Bollards and studs* are approved of, but unfortunately the slides and carriages were sent from Woolwich with only one bollard out of ten, and no studs. They were received only two or three days before the ship sailed, and will no doubt be completed on return to port.

70. *Fourth paragraph*.—"I have directed rolling returns to be filled up daily, and great care to be taken that the columns are never left blank, according to the instructions laid down in that behalf."

71. The filling up of the rolling returns has, under Captain Macdonald's direction, been superintended by Staff Commander Rea, who has been assisted by several subordinates. As the rolling was reported by signal only on five occasions, I

have

have had no opportunity of doing more than compare with other ships those rolls and heels that were given by signal, but the voluminous returns from each ship will enable the Controller's department to make a minute and exhaustive comparison.

72. *Fifth paragraph*.—"On the conclusion of the cruise you are to furnish me with a report (in duplicate) on these subjects."

73. I beg herewith to forward the report in duplicate.

74. *Sixth paragraph*.—"I shall be glad to receive your opinion and suggestions on any other points which you may deem of importance for the information of the Lords Commissioners of the Admiralty."

75. I beg to state that I am preparing a statement of my opinions, and will add some suggestions on certain points, confining them to what I suppose to be objects of the cruise, viz. :—

- (1.) Familiarising officers with the new system of tactics.
- (2.) Testing the new signal books, and new tactics previous to their being approved.
- (3.) Collection of data to aid the Controller's department in designing new ships.
- (4.) Exercising the men at gun drill.
- (5.) Testing slides, carriages, guns, &c.
- (6.) Exercise of men aloft.
- (7.) Familiarising the junior officers with the various sail evolutions.
- (8.) Taking ships in tow at sea.
- (9.) Sanitary questions in compartmental ships.
- (10.) Miscellaneous, all of which will be included in an Appendix.

76. The reports and rolling returns from the "Bellerophon," "Achilles," and "Prince Consort," are transmitted herewith.

Those from the "Defence" have not yet been received by me.

I have, &c.
(signed) Alfred P. Ryder,
Rear Admiral,

DIAGRAM OF TRIAL OF SAILING ON A WIND, 20TH JUNE, 1868.

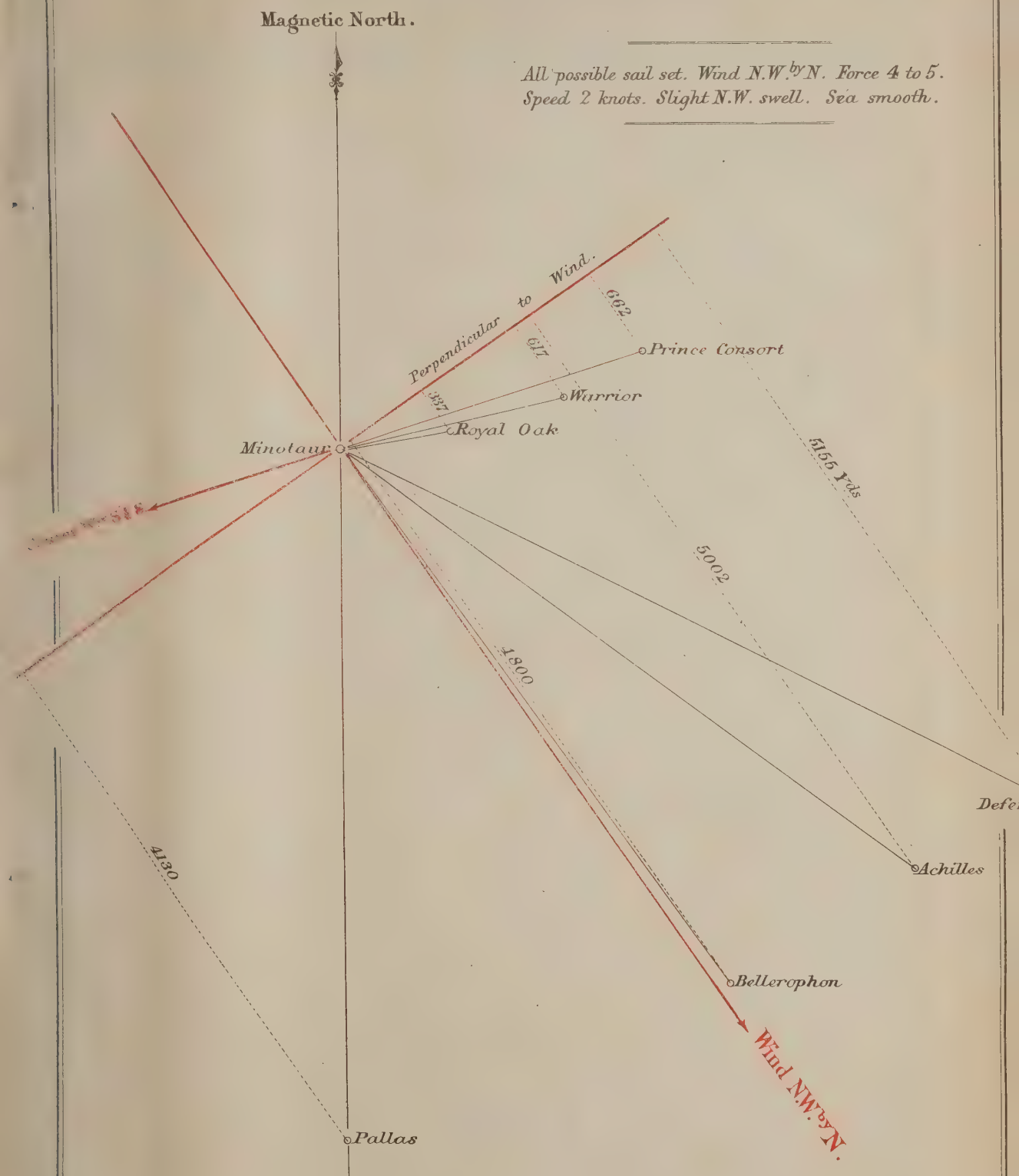
Positions at commencement of trial — II a. m.

0 500 1000 2000 3000 Yards

Scale One Inch = 1000 Yards

Magnetic North.

All possible sail set. Wind N.W. by N. Force 4 to 5.
Speed 2 knots. Slight N.W. swell. Sea smooth.

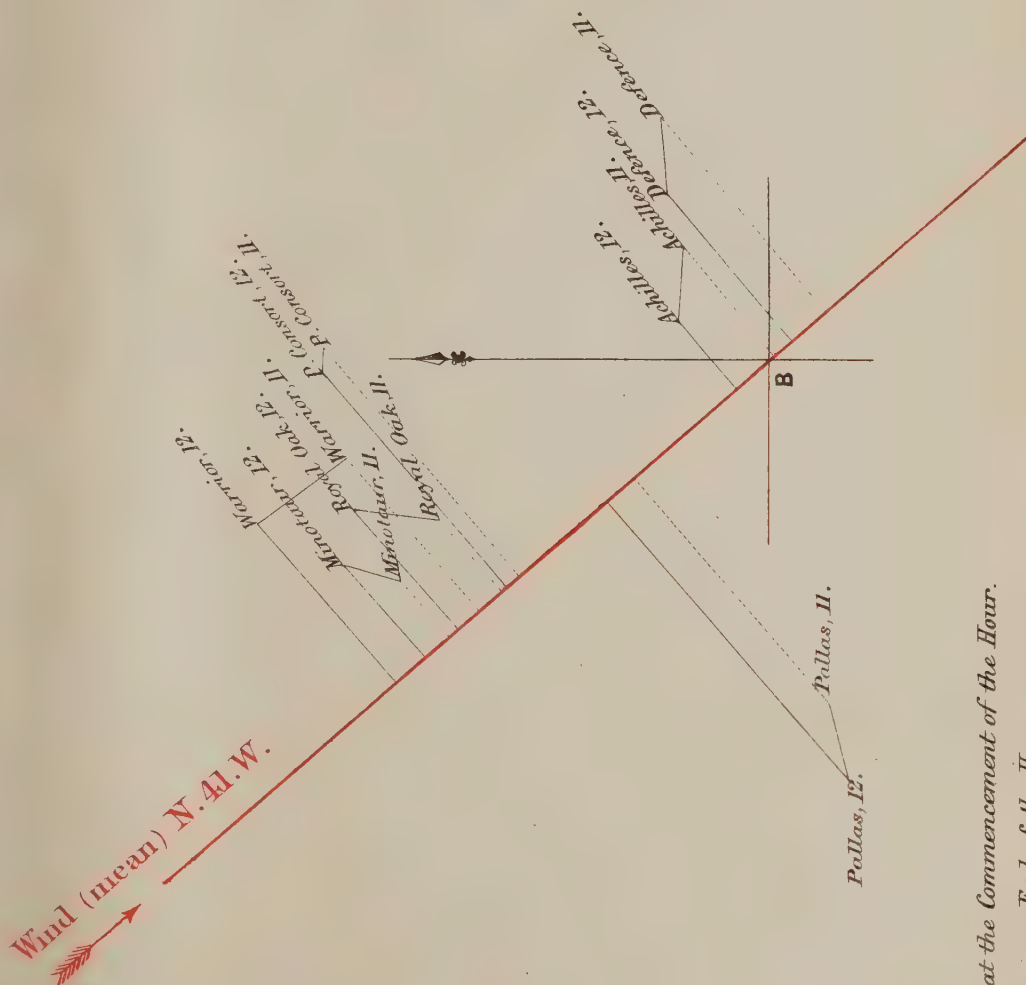
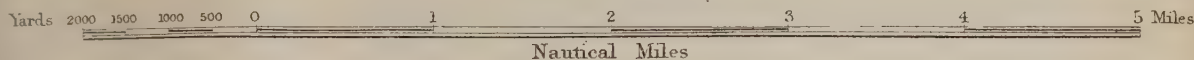


Royal Oak.	N. 80° E.	837	Yards or..	337	Yards Leeward of Minotaur.
Warrior.	N. 77° E.	1721	"	617	" " "
P. Consort.	N. 72° E.	2401	"	662	" " "
Pallas.	S. 1° W.	5042	"	4130	" " "
Bellerophon.	S. 36° E.	4803	"	4800	" " "
Achilles.	S. 53° E.	5290	"	5002	" " "
Defence.	S. 63° E.	5894	"	5155	" " "

J. Marsh
Staff Commander

TRIAL OF SAILING, 20TH JUNE, 1868.

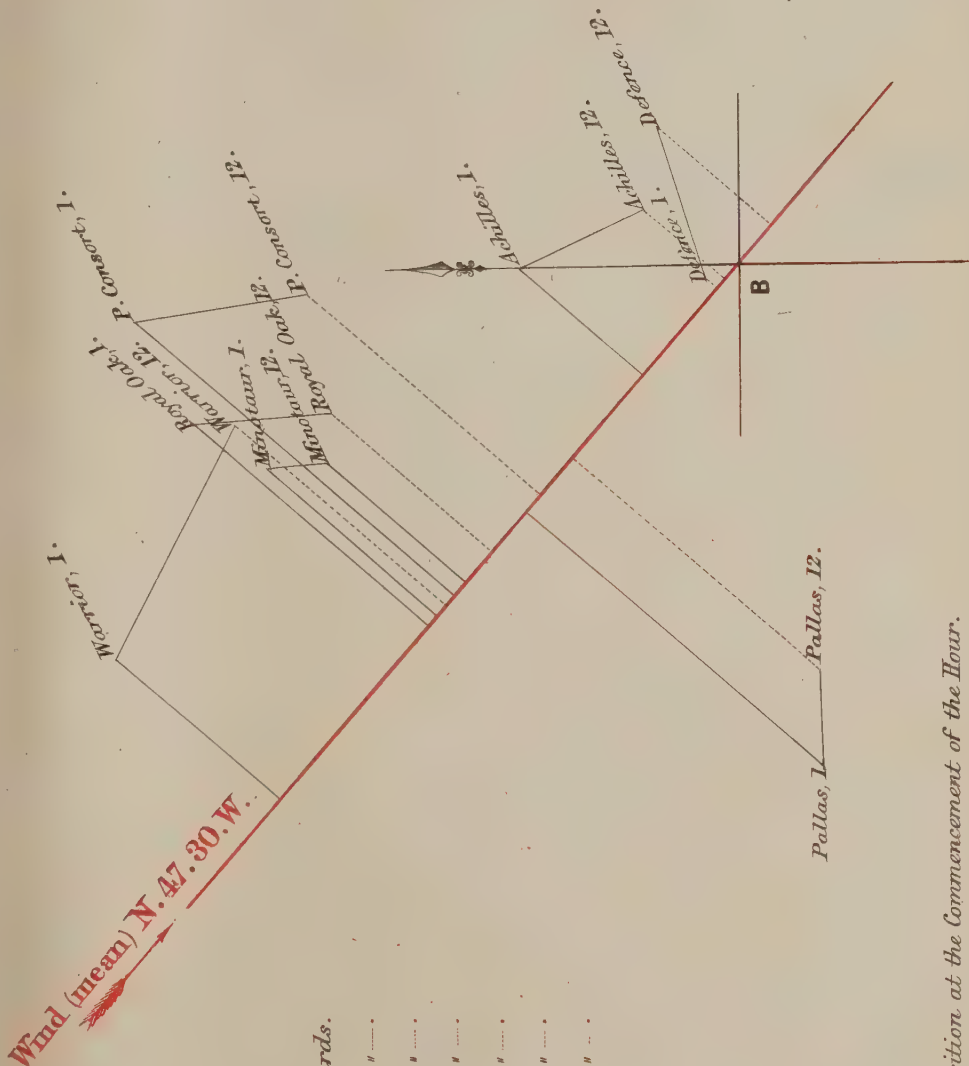
11 a.m. to Noon.



Minotaur.	+	300	Yards.
Royal Oak.	+	730	"
Warrior.	+	1200	"
P. Consort.	+	180	"
Achilles.	+	550	"
Defence.	+	500	"
Pallas.	+	300	"

The Broken Line shows the 1st Position at the Commencement of the Hour.
The Continued Line " " 2nd " " End of the Hour.

TRIAL OF SAILING, 20TH JUNE, 1868.
Noon to 1. p.m.



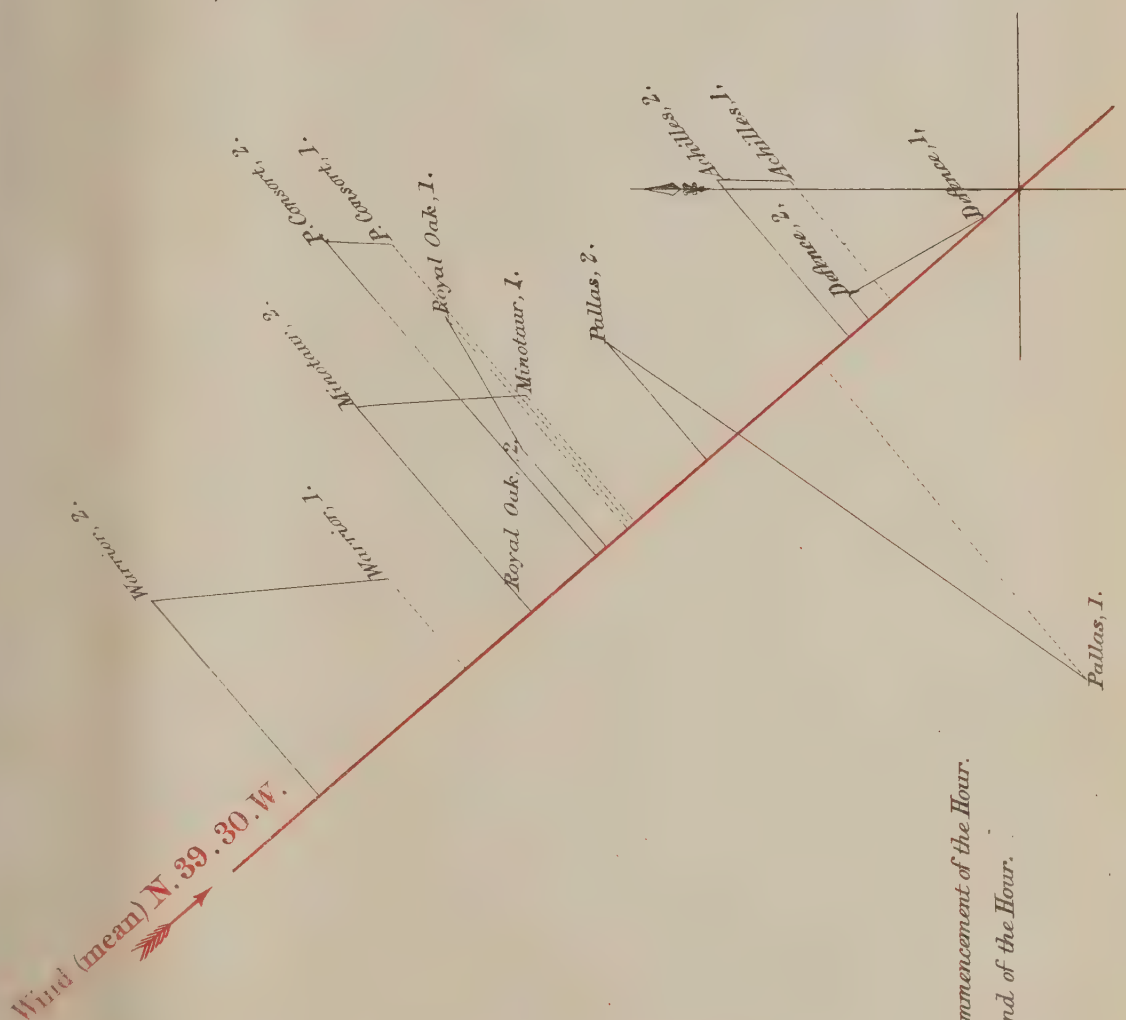
Minotaur.	+	350	Yards.
Royal Oak.	+	1000	"
Warrior.	+	2900	"
P. Consort.	+	1500	"
Achilles.	+	1450	"
Defence.	+	1000	"
Pallas.	+	700	"

The Broken Line shews the 1st Position at the Commencement of the Hour.
The Continued Line " " 2nd " " " " End of the Hour.

TRIAL OF SAILING, 20TH JUNE, 1868.

I.p.m. to II.p.m.

Yards 2000 1500 1000 500 0 1 2 3 4 5 Miles
Nautical Miles

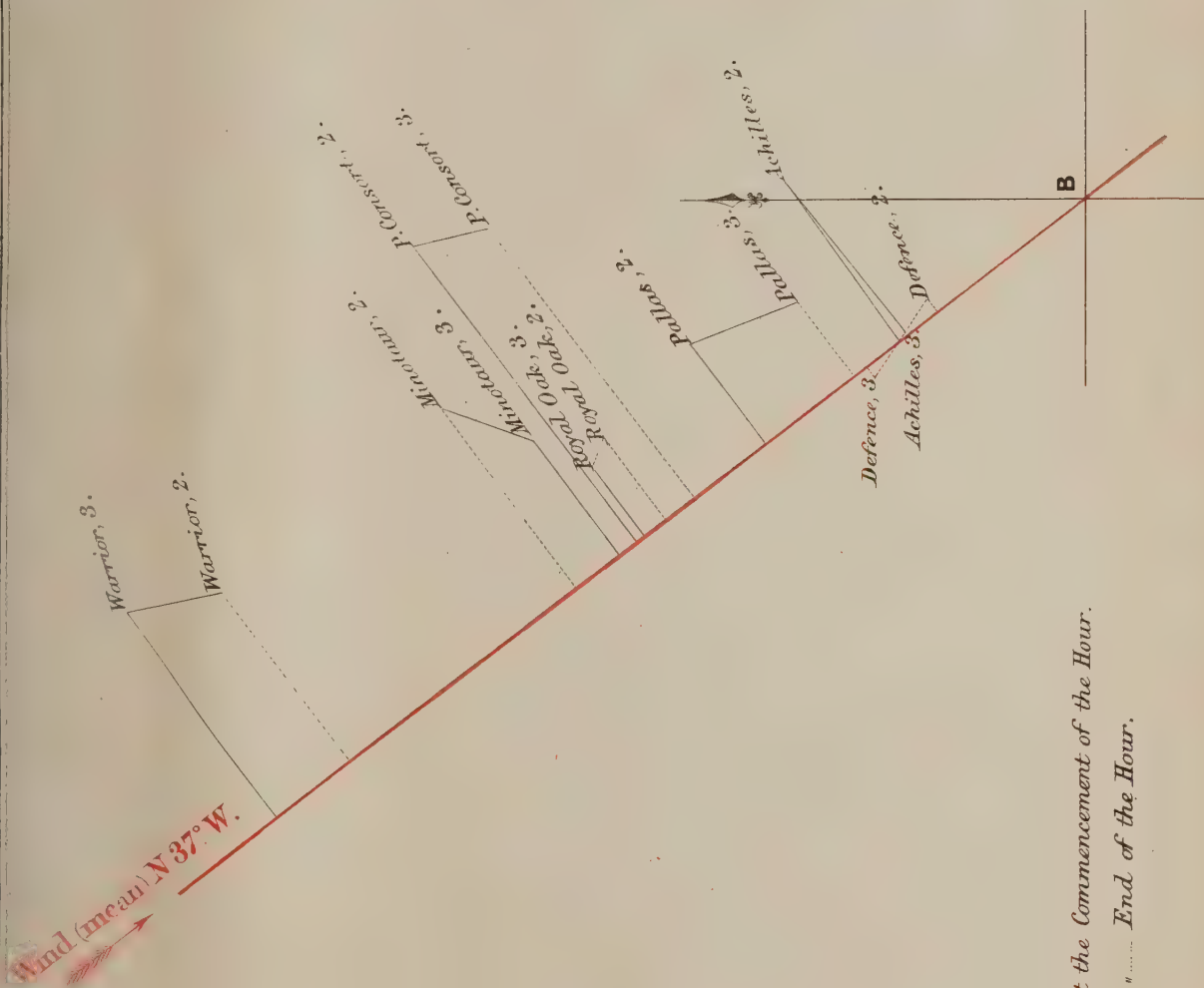
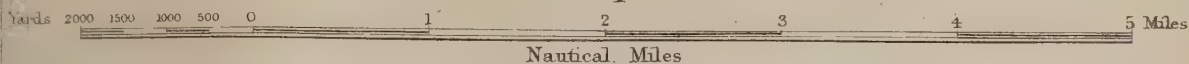


Minotaur.	+	1500	Yards.
Royal Oak.	+	300	
Warrior.	+	2100	
P. Consort.	+	600	
Achilles.	+	450	
Defence.	+	1800	
Pallas.	+	1450	

The Broken Line shows the 1st Position at the Commencement of the Hour.The Continued Line " 2nd " " " " End of the Hour.

TRIAL OF SAILING, 20TH JUNE, 1868.

2 to 3 p.m.



Minotaur.	-	530	Yards.
Royal Oak.	+	100	"
Warrior.	+	950	"
P. Consort.	-	800	"
Achilles.	+	100	"
Defence.	+	1000	"
Pallas.	-	1250	"

The Broken Line shews the 1st Position at the Commencement of the Hour.

The Continued Line " " 2nd " " " End of the Hour.

DIAGRAM OF TRIAL OF SAILING ON A WIND, 20TH JUNE, 1868.

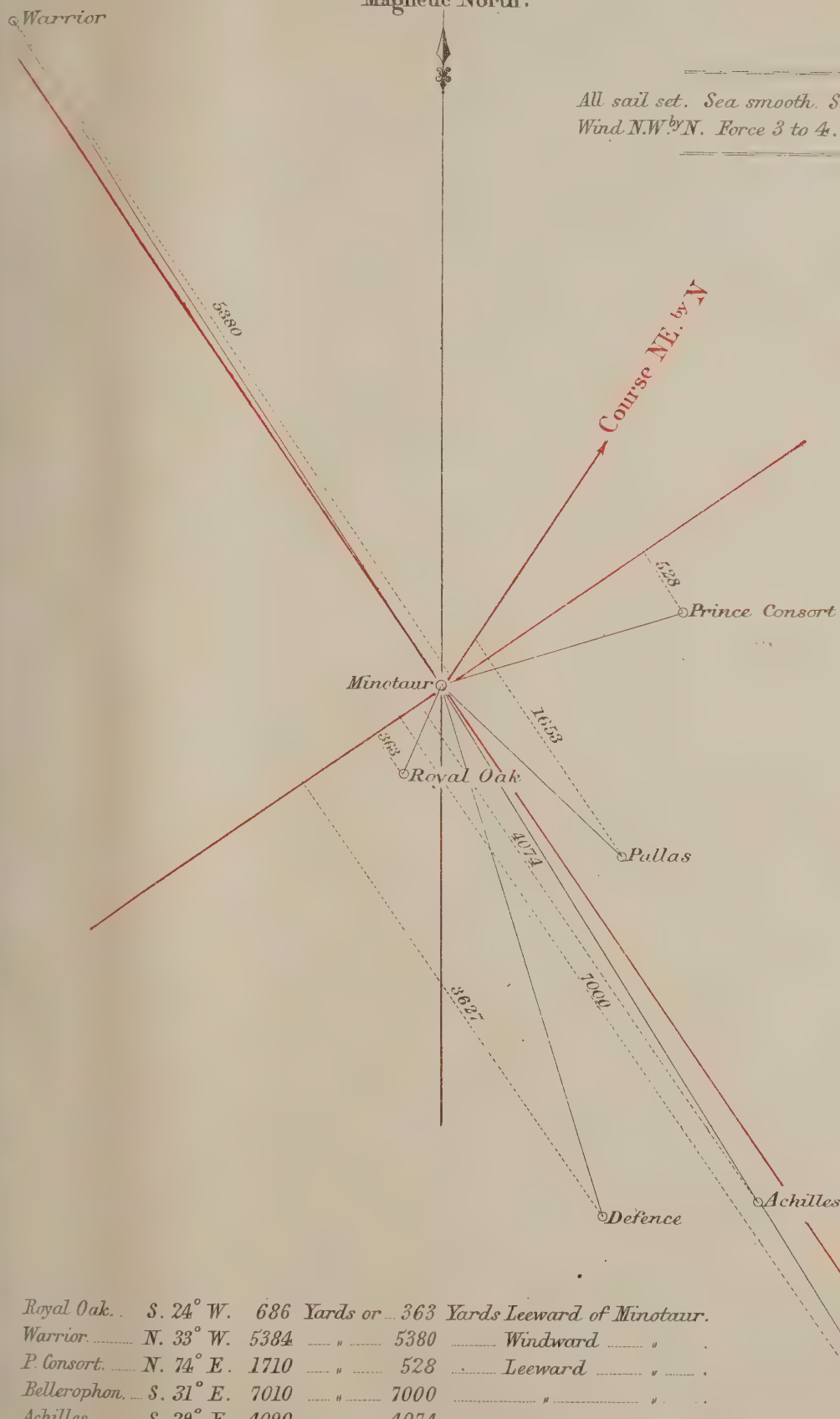
Positions at end of trial 2^H 45^M p.m.

0 500 1000 2000 3000 Yards

Scale One Inch = 1000 Yards.

Magnetic North.

All sail set. Sea smooth. Slight N.W.^y swell.
Wind N.W.^y N. Force 3 to 4. Speed 3 knots.



Royal Oak.	S. 24° W.	686 Yards or	363 Yards Leeward of Minotaur.
Warrior.	N. 33° W.	5384	" 5380 " Windward "
P. Consort.	N. 74° E.	1710	" 528 " Leeward "
Bellerophon.	S. 31° E.	7010	" 7000 " " "
Achilles.	S. 29° E.	4090	" 4074 " " "
Defence.	S. 17° E.	3793	" 3627 " " "
Pallas.	S. 46° E.	1690	" 1653 " " "

G. Marsh
Staff Commander

Bellerophon

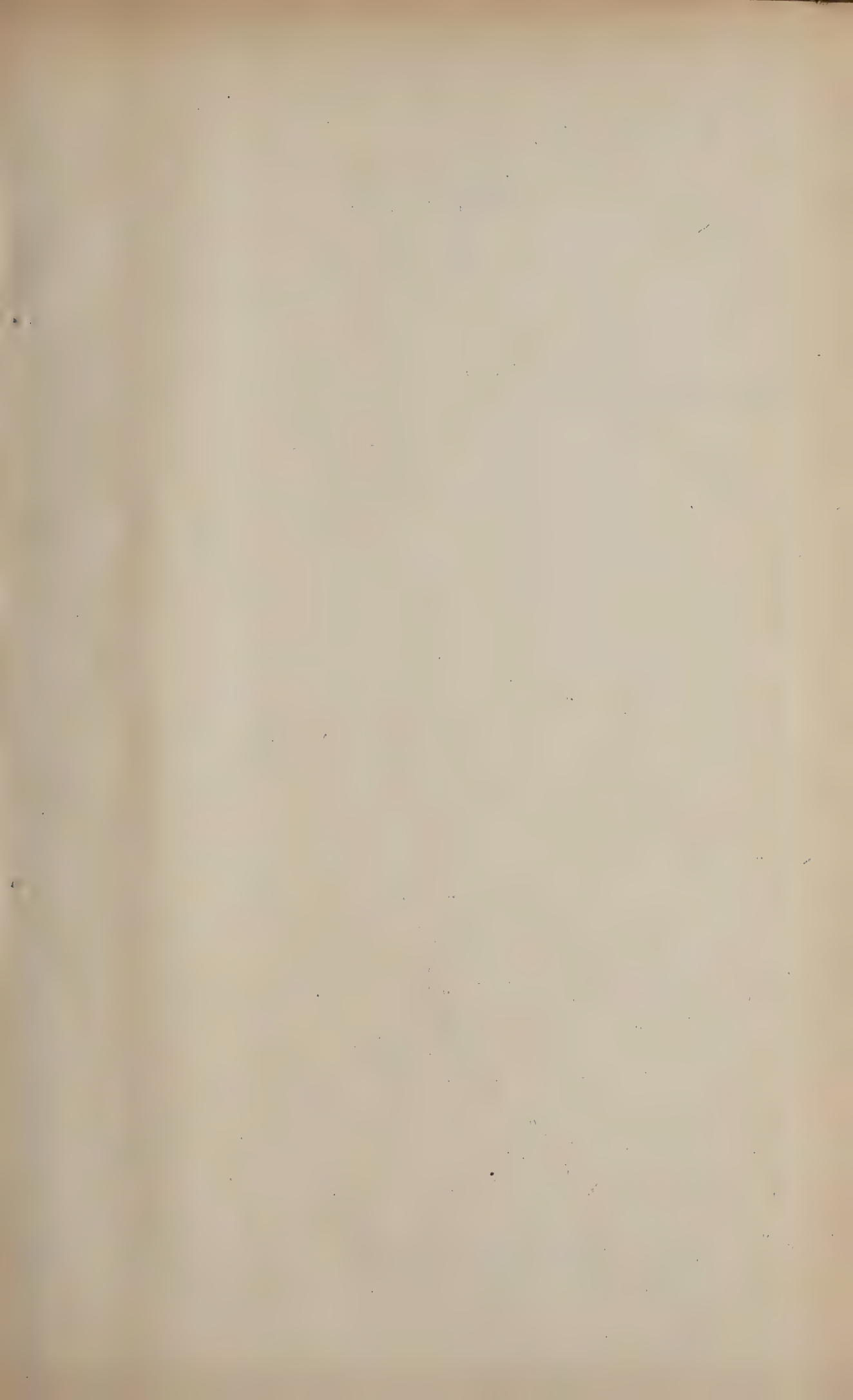


DIAGRAM OF TRIAL OF SAILING ON A WIND, 29TH JUNE, 1868.

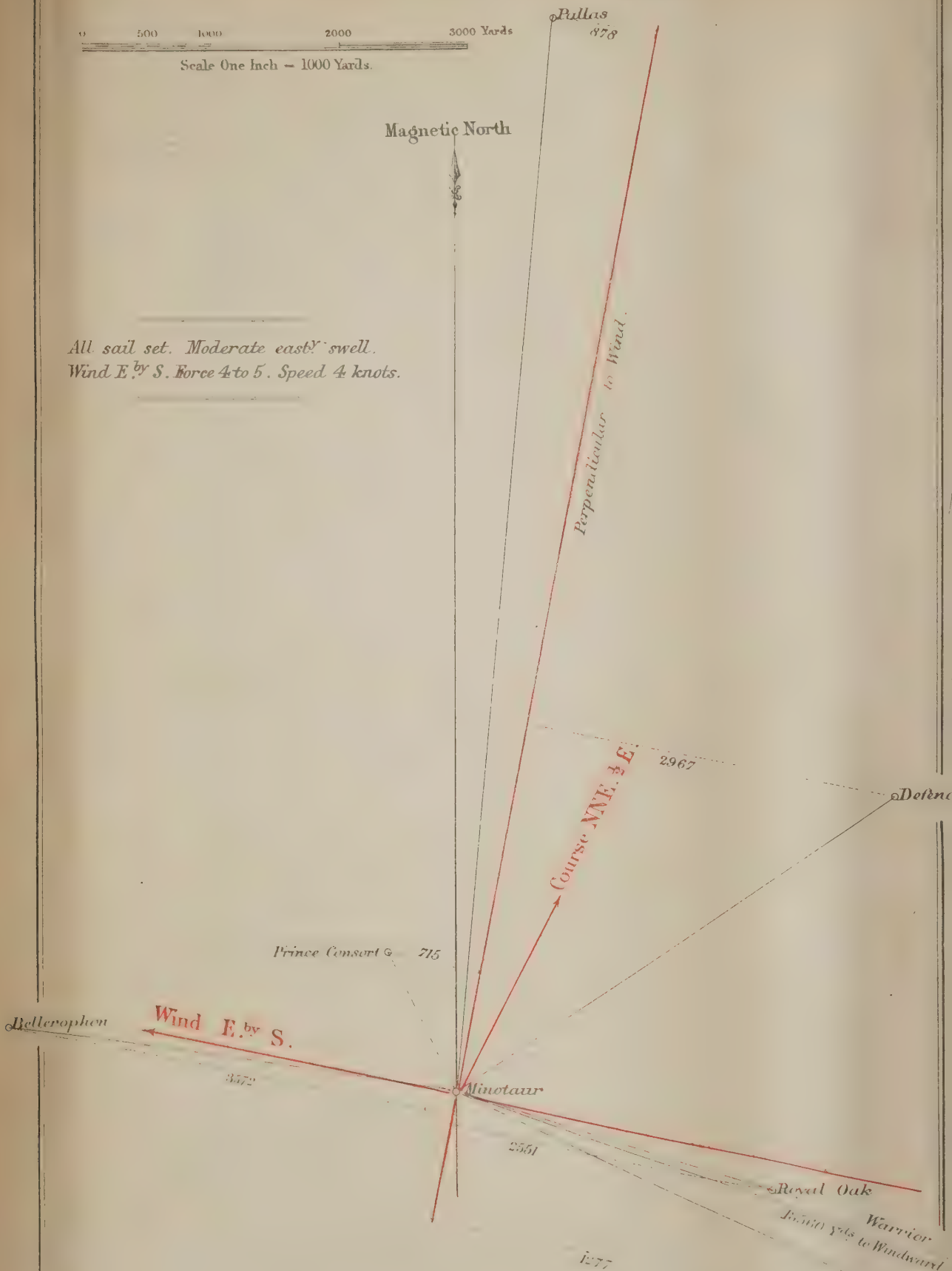
Positions at close of trial 4^H 45^M p.m.

0 500 1000 2000 3000 Yards

Scale One Inch = 1000 Yards.

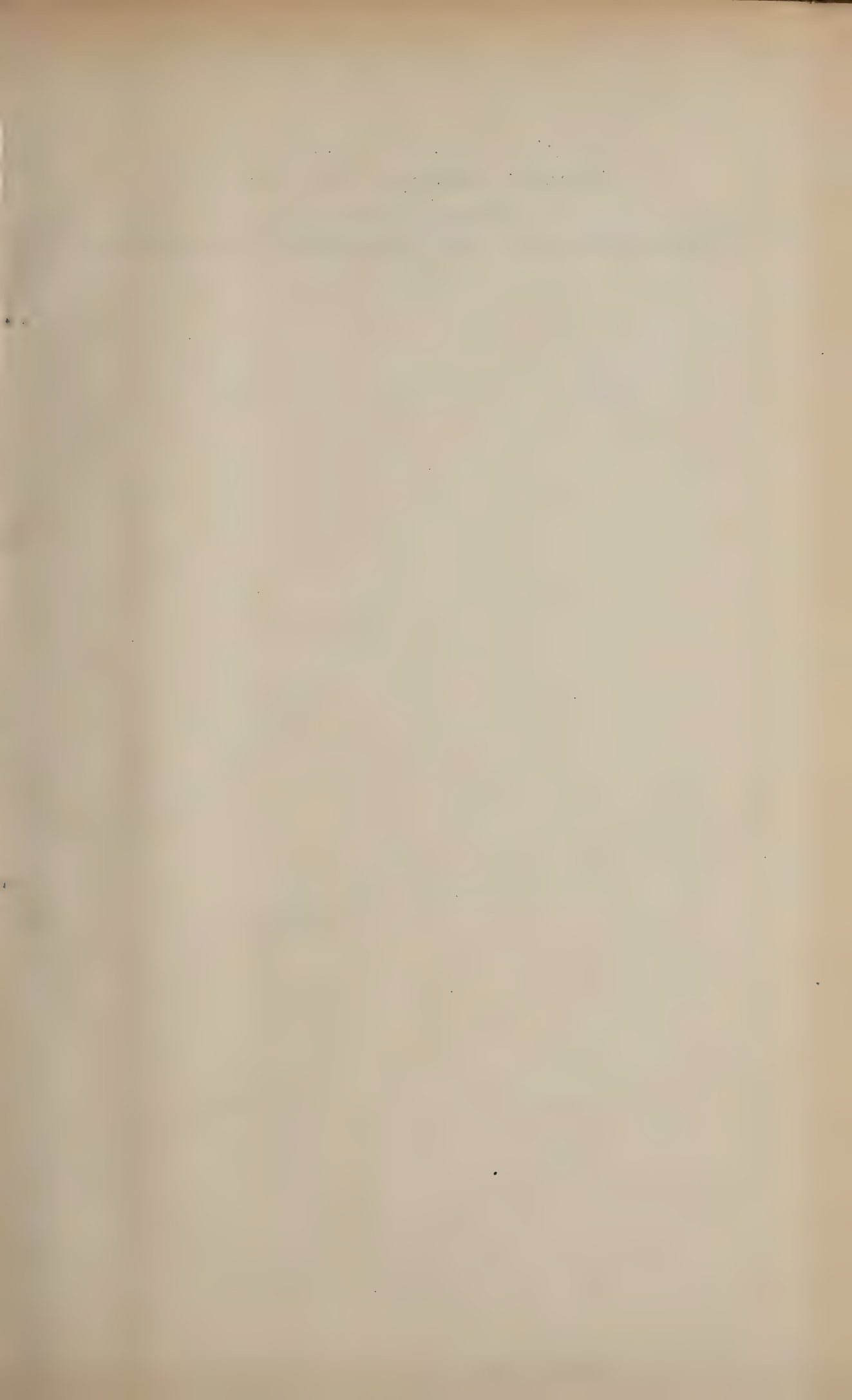
Magnetic North

All sail set. Moderate east^N swell.
Wind E. by S. Force 4 to 5. Speed 4 knots.

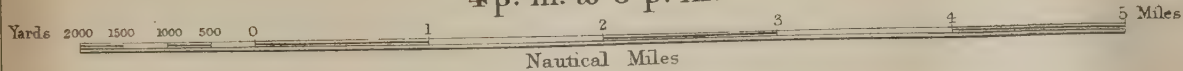


Royal Oak.	S. 73° E.	2565 Yards or 2551 Yards	Windward of Minotaur.
Warrior.	S. 72° E.	13660	" " " "
P. Consort.	N. 25° W.	1216	" " " "
Bellerophon.	N. 82° W.	3577	" " " "
Achilles.	S. 65° E.	4408	" " " "
Defence.	N. 57° E.	4125	" " " "
Pallas	N. 5° E.	8403	" " " "

G. Marsh Staff Commander

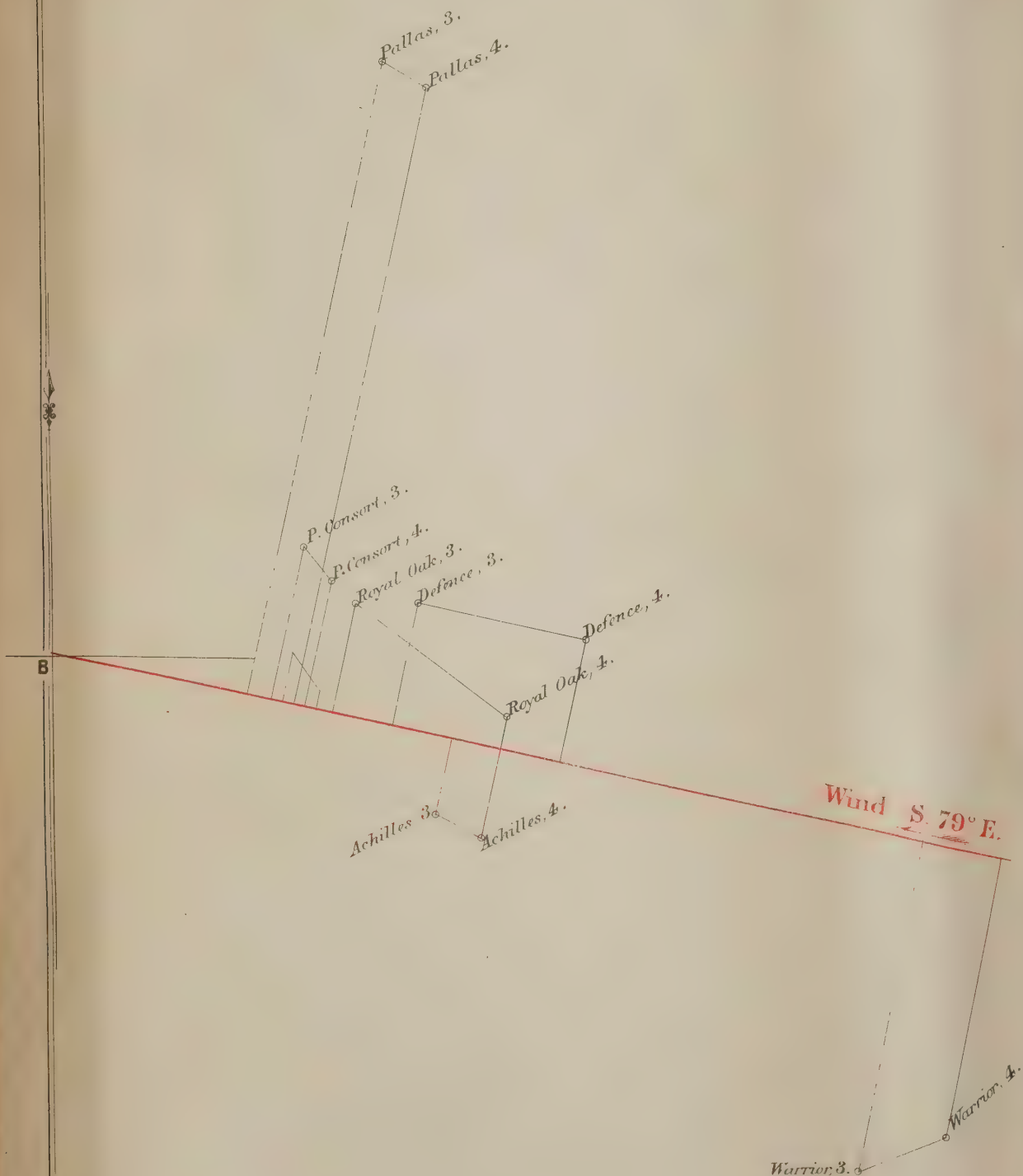
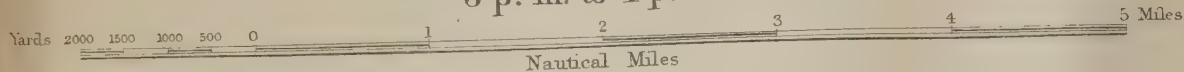


4 p. m. to 5 p. m.



TRIAL OF SAILING, 29TH JUNE, 1868.

3 p. m. to 4 p. m.

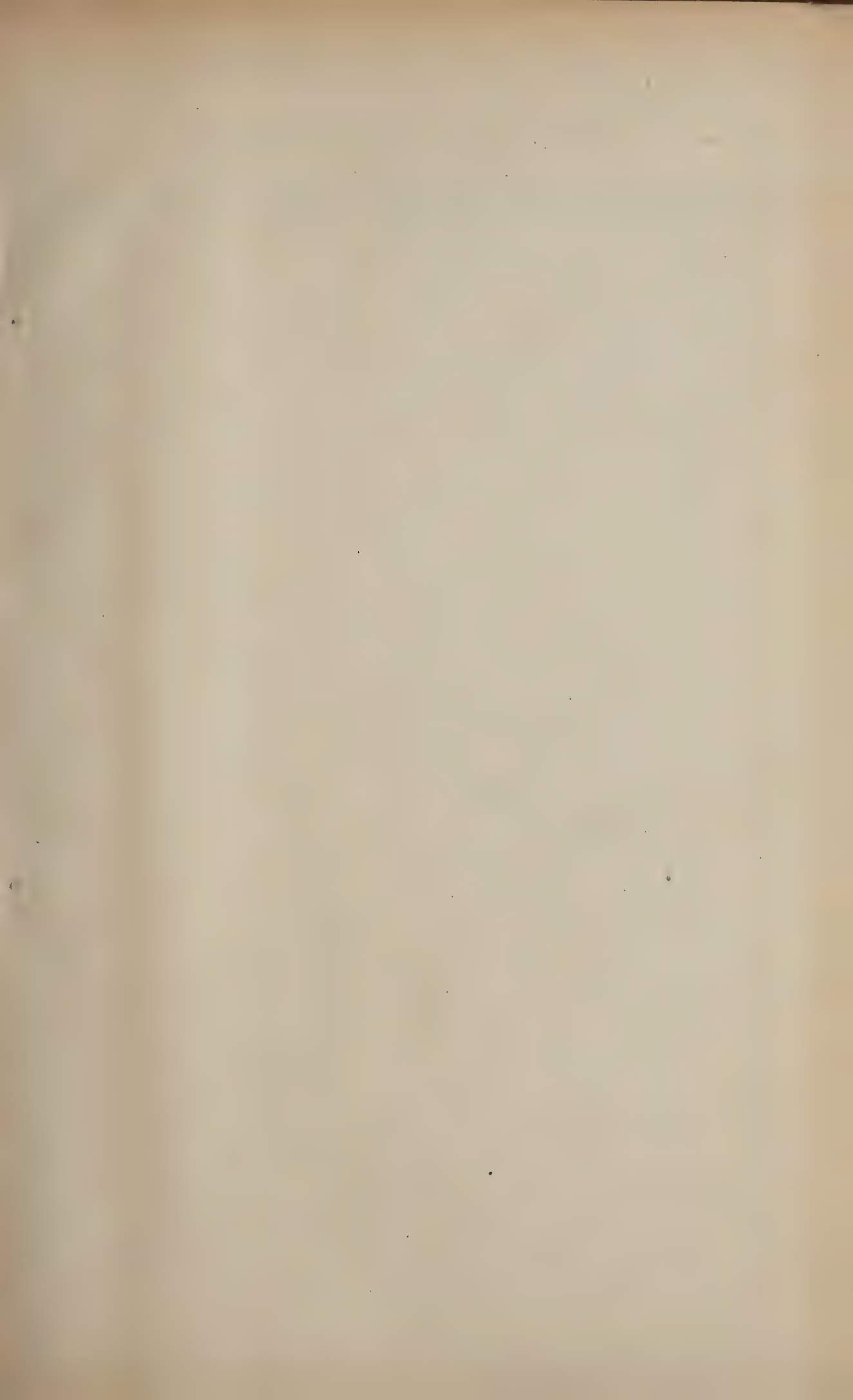


TRIAL OF SAILING, 29TH JUNE, 1868.

2 p.m. to 3 p.m.

Yards 2000 1500 1000 500 0 1 2 3 Miles
Nautical Miles

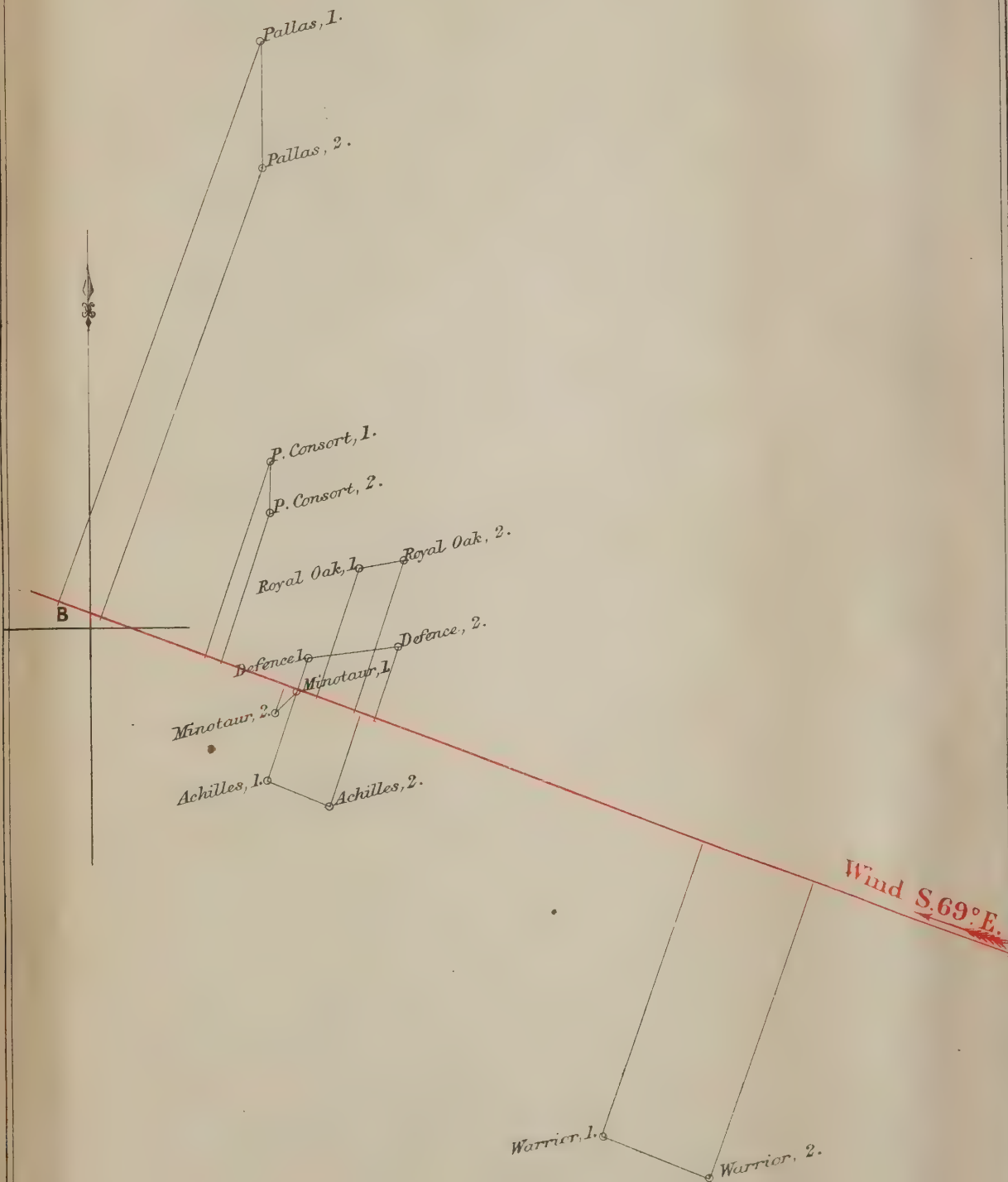


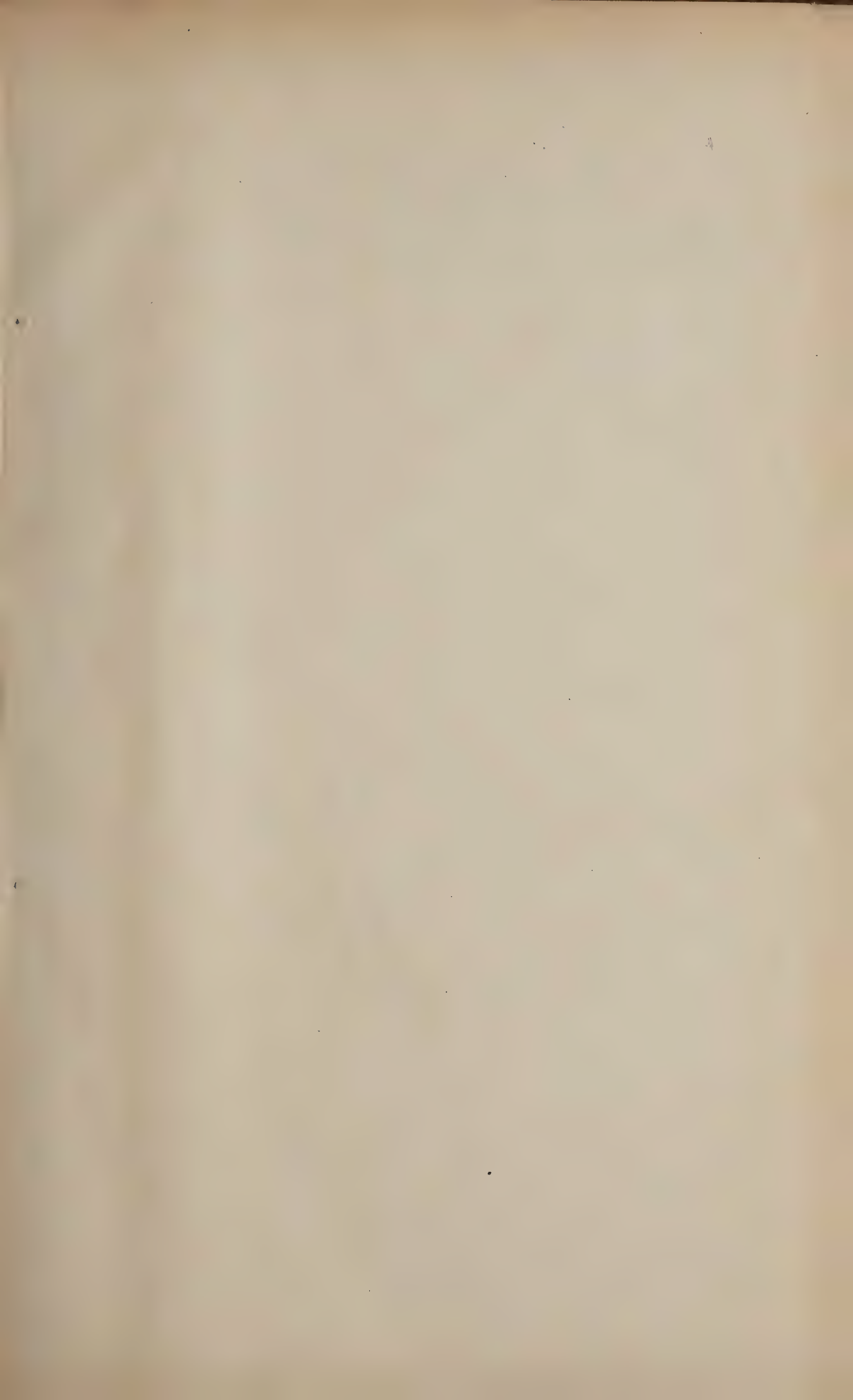


TRIAL OF SAILING, 29TH JUNE, 1868.

1 p.m. to 2 p.m.

Yards 2000 1500 1000 500 0 1 2 3 4 5 Miles
Nautical Miles

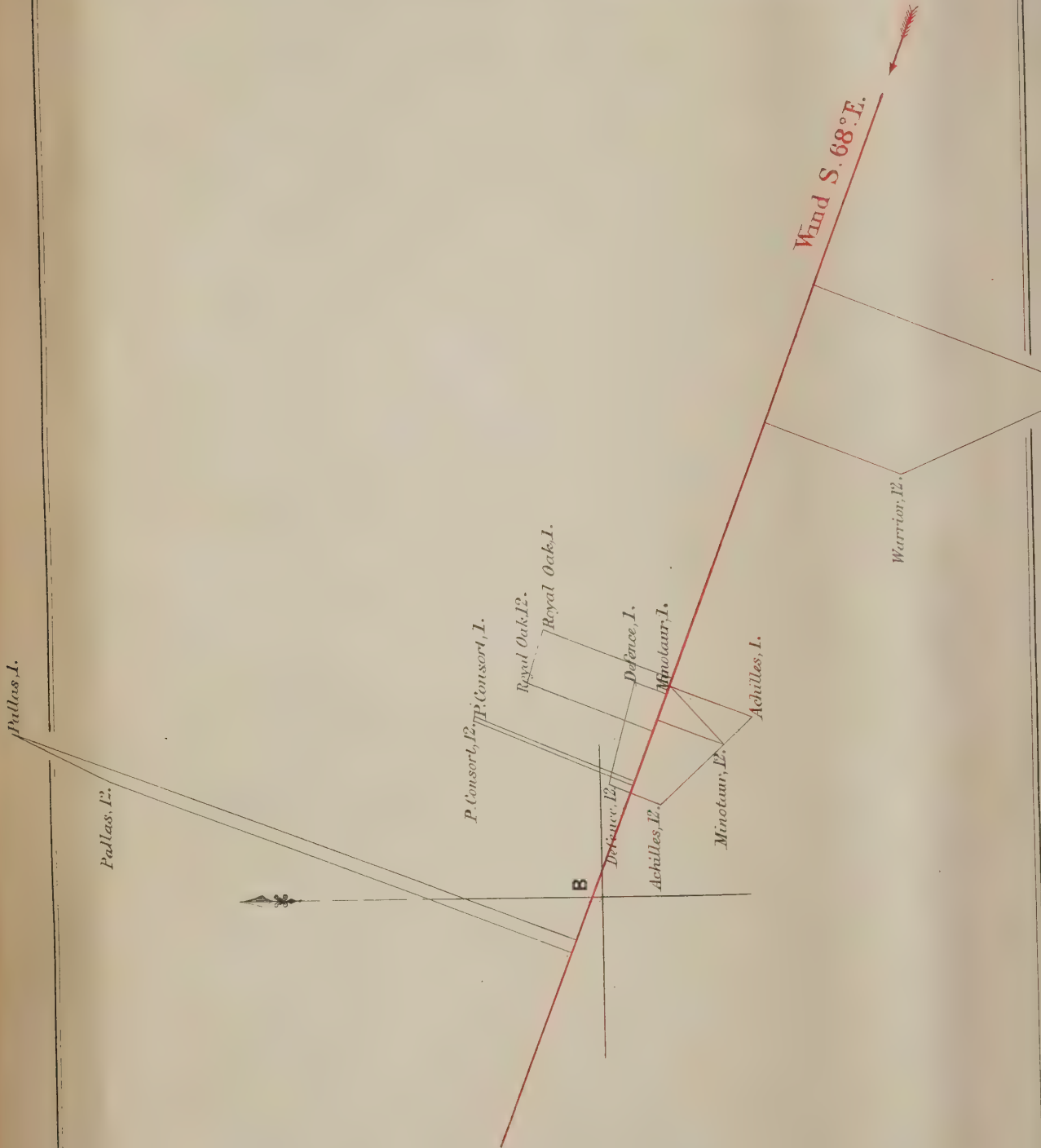


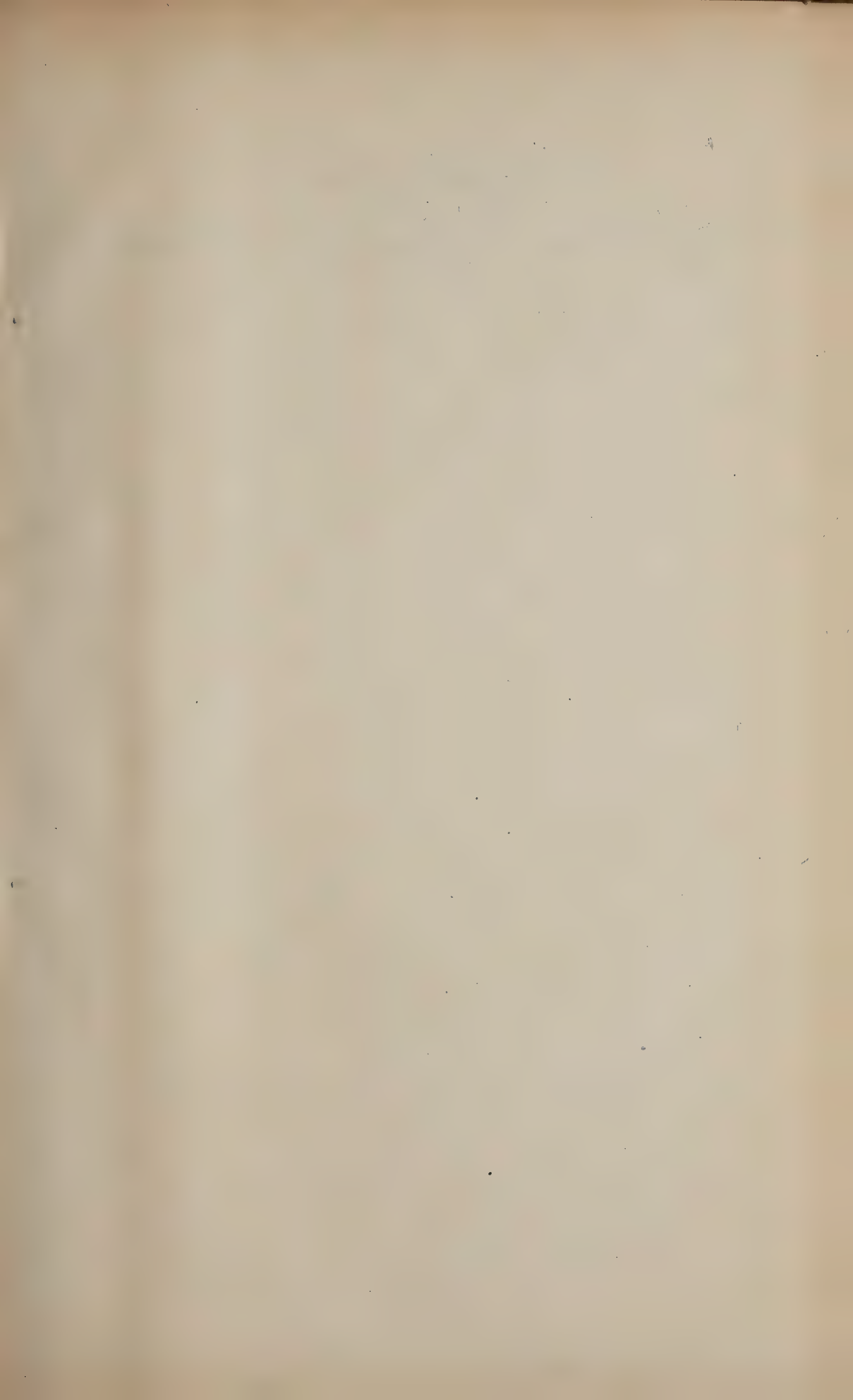


TRIAL OF SAILING, 29TH JUNE, 1868.

Noon to 1.

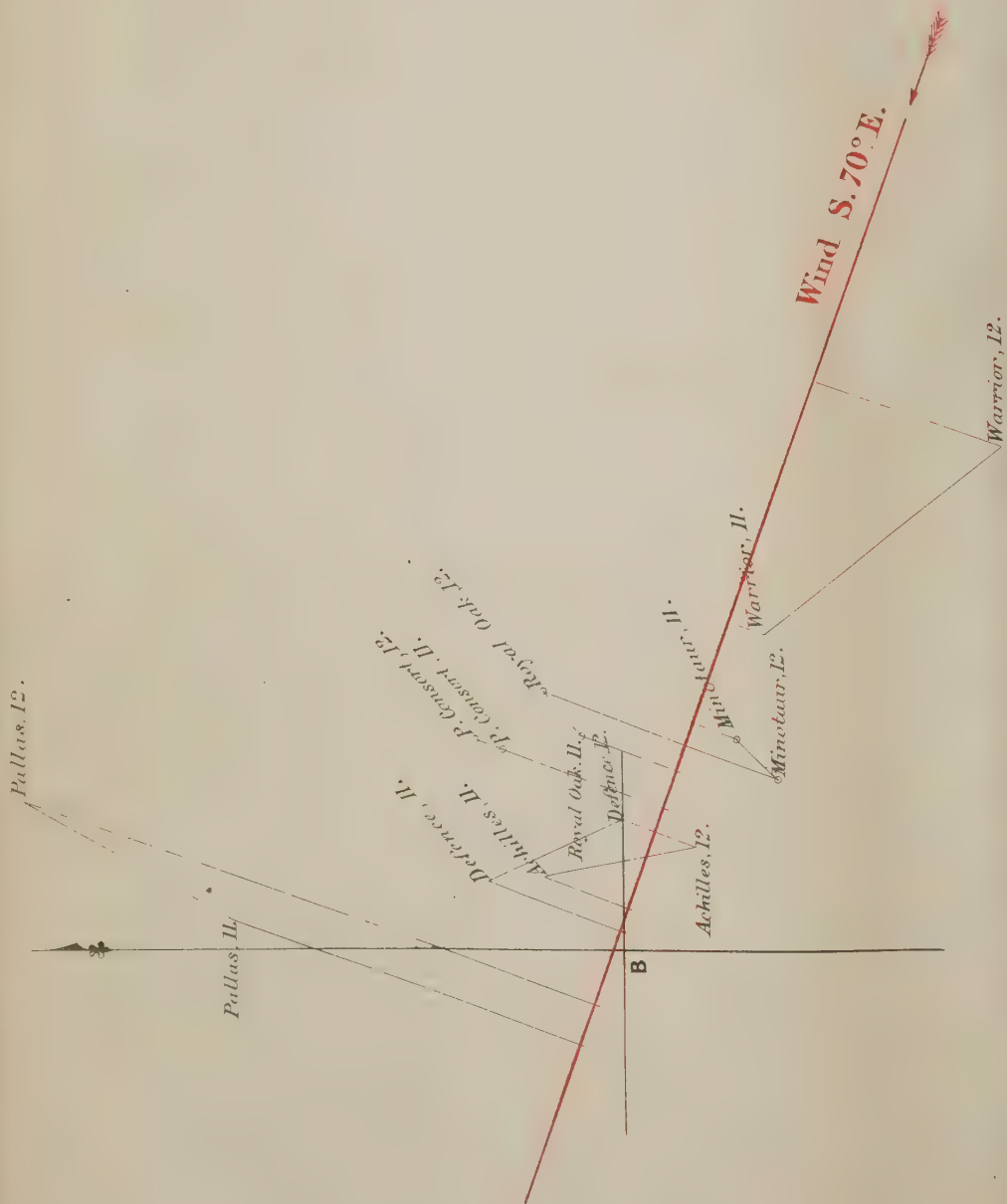
Yards 2000 1500 1000 500 0 1 2 3 4 5 Miles.
Nautical Miles





TRIAL OF SAILING, 29TH JUNE, 1868. 11 a.m. to Noon.

Yards 2000 1500 1000 500 0 1 2 3 4 5 Miles
Nautical Miles





10 a.m. to 11 a.m.

A hand-drawn map of a river bend. A red line with an arrow indicates a wind direction of S. 71° E. The map includes several place names and distances, such as Pallas, 10., Warrior, 10., and Mindeaur, 10. The river is depicted as a winding line, and the map is oriented with a north arrow pointing towards the top left.

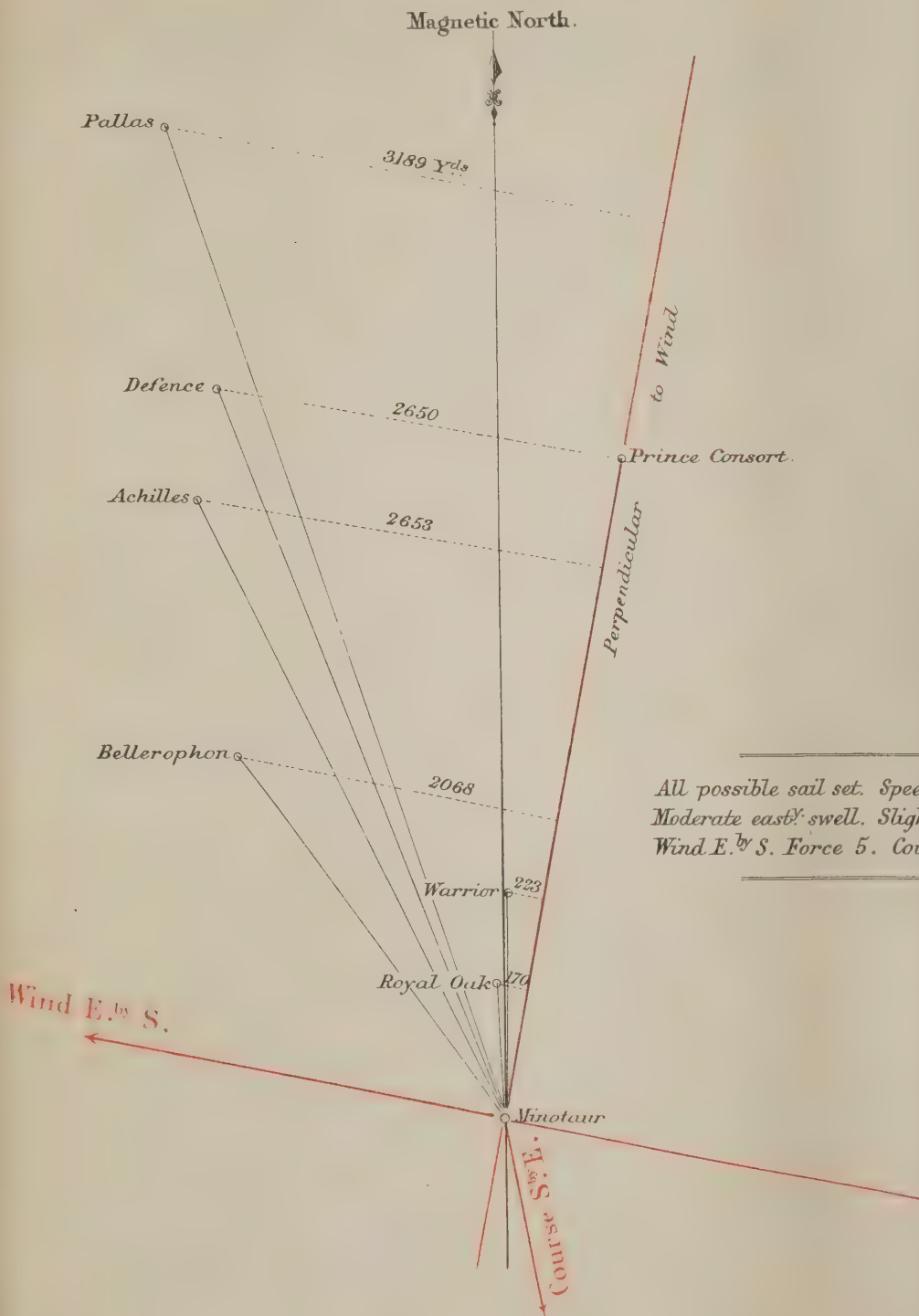


DIAGRAM OF TRIAL OF SAILING ON A WIND, 29TH JUNE, 1868.

Positions at beginning of trial 10 a.m.



Scale One Inch = 1000 Yards.



Royal Oak.	N. 2° W.	820 Yards,	or 170 Yards Leeward of Minotaur.
Warrior.	N. 2° E.	1426 "	223 " " "
P. Consort.	N. 10° E.	4174 "	in Line with " " "
Bellerophon.	N. 36° W.	2828 "	2068 Yards Leeward of " "
Achilles.	N. 26° W.	4408 "	2653 " " "
Defence.	N. 21° W.	5000 "	2650 " " "
Pallas.	N. 18° W.	6577 "	3189 " " "

J. Marsh
Staff Commander

Sub-Enclosure 2.

SAILING to WINDWARD TRIAL.

Top-gallant sails. Speed, 4 to 5 knots.

Seven hours; 10 a.m. to 5 p.m. 29 June 1868.

Minotaur - - -	{	+ 250 yards.	Achilles - - -	{	+ 1,250 yards.
		- 200 "			+ 850 "
		+ 420 "			+ 1,600 "
		- 100 "			+ 900 "
		+ 100 "			+ 1,750 "
		+ 600 "			+ 780 "
Royal Oak - - -	{	+ 380 "	Defence - - -	{	+ 820 "
		+ 200 yards.			+ 1,300 yards.
		+ 320 "			+ 1,200 "
		+ 690 "			+ 1,450 "
		+ 580 "			+ 1,150 "
		- 600 "			+ 100 "
Warrior - - -	{	+ 2,400 "	Pallas - - -	{	+ 850 yards.
		- 280 "			+ 550 "
		+ 1,950 yards.			+ 200 "
		+ 2,900 "			+ 650 "
		+ 2,100 "			+ 1,300 "
		+ 1,700 "			+ 750 "
Prince Consort - -	{	+ 2,300 "	Bellerophon - - -	{	+ 400 "
		+ 1,180 "			
		+ 1,800 "			
		0 yards.			
		0 "			
		+ 50 "			

"Warrior's" last distance was estimated, as her angle was not considered trustworthy.

The "Bellerophon" missed stays twice; once before the trial commenced, and once after the trial was over. This was attributed partly to the swell, and partly to her not having the first reefs out on the first occasion, and to the swell in the second, when her jibs were hauled down, which saved her staying after first once.

ABSTRACT.

IN SEVEN HOURS.

Warrior - - - - -	+ 13,930 yards.
Defence - - - - -	+ 8,950 "
Achilles - - - - -	+ 7,950 "
Pallas - - - - -	+ 4,700 "
Royal Oak - - - - -	+ 3,810 "
Minotaur - - - - -	+ 1,450 "
Prince Consort - - -	+ 980 "
Bellerophon - - - -	0

Sub-Enclosure 3.

SERVICE Description of CARRIAGES and SLIDES in Her Majesty's Ship
"BELLEROPHON."

In Battery, No. 8.—Ten 9-inch 12½ ton M. L. R. guns, box-girder carriage, and box-girder slide, with original (Scott's) running in and out and training gear.

In Battery, No. 5.—W. T. Sliding double plate carriage and wrought iron slide, with bevilled side wheel training gear, and running in and out gear.

The Remainder.—Wrought iron double plate carriages, and wrought iron slides with *rear training gear*.

Out of Battery.—Five 7-inch 6½ ton M. L. R. guns.

Bow and Stern Guns.—Wrought iron single plated carriages and slides, fitted with old compressor gear.

Quarter Deck.—Wrought iron double plate carriages and slides.

One fitted with single running in gear.

REPORT on Accidents at General Quarters.

Sir,

H. M. S. "Bellerophon" at sea, 11 June 1868.

In answer to the inclosed questions, I have the honour to report that—(1.) On the night of the 9th, while at general quarters, an accident happened at the third gun, the starboard side, in the following manner:—No. 14 (by his own statement) coming off deck and seeing his gun out, immediately seized hold of the winch handle, imagining the gun ought to be run in; just then No. 1 fired, and through the compressors not having been set up, the winch not having been disconnected, and the running in chain being fixed to the carriage, the recoil of the gun caused the handle to fly round, striking No. 14 on the left shoulder with such force as to incline the handle to its original position, at an angle of about 13°, and breaking No. 14's collar bone.

This accident occurred through the carelessness of four men, Nos. 10, 8, 1, and 14.

No. 10, in not disconnecting the running in and out gear.

No. 8, in not setting up the compressor.

No. 1, in not seeing these duties performed before firing, and through over zeal, through carelessness and stupidity, of No. 14.

I would suggest that the chains be connected and disconnected by the new pattern nipping levers now in use on service carriages, instead of remaining fixed to them on all occasions, as, however well the men may be trained, I believe in the heat of action, the guns would be constantly fired with the winch gear connected, when, though no accident might occur, an immense and undue strain would be brought on the chains, multiplying gear, and sprocket-wheel.

(2.) The accidents to gear on slides and carriages at general quarters on the 10th, were—

(a.) Securing bolt and slide clutch on right of No. 2 and 10 carriages carried away; the slide clutches on the left being stretched and bent out of shape.

(b.) Two bolts connecting running in chains to carriage on No. 4, broken off.

(c.) Bolt connecting cross strengthening bar underneath No. 1, slide broken short off.

(d.) Through the compressor having been set up too taut, the gun, being unable to recoil horizontally, must have jumped, forcing the flange out of its position from underneath the tramway of the slide, and making it project outwards; on the next discharge this projection catching the tripper, wrenched the securing bolt and clutch off. The bolts should be placed higher up on the carriage, clear from the compressor lever; stouter bolts, with shoulders towards the strain, should be used, as in three or four cases, by merely setting up the securing chains, the bolts have been broken short off.

(e.) The fractions in both connecting bolts show flaws in the iron, but the tremendous strain, which by firing must be brought on these bolts, and also on each link of the chain when it is in constant connection with the carriage would necessarily try the chains, and in case of the slightest flaw, be liable to carry away a link, which

would

would more or less disable the gun; though the same chain, if disconnected, would continue to bear any strain likely to be put upon it. Nipping levers, as before stated, would prevent any accidents to life or gear.

(c.) This bolt is of little consequence, and merely carried away through being made of bad iron; the fracture showing very short fibre.

I have, &c.
(signed) *H. Rawson*,
Gunnery Lieutenant.

Submitted for the information of Rear Admiral Ryder.

(signed) *R. J. Macdonald*, Captain.

12 June 1868.

Enclosure No. 2, in Admiral *Warden's* Letter No. 170, of 11th July 1868.

REPORT on the late Cruise of the Channel Squadron from Captain *Macdonald*.

Sir, H.M.S. "Bellerophon," Plymouth, 6 July 1868.

In compliance with Admiral *Warden's* letter of the 3rd June, calling my attention to several points to be noted in the course of the late cruise—

1. I beg to inform you "*as to the general handiness of the several classes of ships comprising the squadron, and which class in my opinion presents the greatest advantages for ensuring speedy evolutions, and for giving effect to ramming.*"—I consider the "Bellerophon" class of ships presents the greatest advantages for ensuring speedy evolutions under steam, the ship fitted as she is with the "hanging rudder," being capable of turning rapidly in a small area, which would facilitate the act of ramming, if considered advisable to do so, in a ship like this on which so large a sum has been expended for the express purpose of enabling her to carry the armament of 12-ton guns.

2. "*The general capability of the ship under my command for fighting her guns in a seaway as compared with others.*"—I am of opinion that this ship possesses superior qualities for fighting her guns in a seaway. She pitches easily, her rolling is less, and her buoyancy and steadiness are superior to almost every other ship of the squadron, as have been frequently reported on under circumstances of wind and sea, far more trying than any experienced on the present cruise. In comparing her motion at sea with the "Minotaur" and "Achilles," due allowance should be made for her being 2,000 tons less burden than either. Minotaur and Achilles.

3. "*As to the Running in Gear.*"—I find the present arrangement of winch and endless chain, answers very well indeed, but would recommend "nipping levers," instead of the plan of keeping the chain permanently fixed to the carriages. This would obviate the liability when the chain is fixed, to cause serious accident by the gun "taking charge" on being fired, should the winch handles be still connected through neglect, also the extra strain brought on all the gear would be avoided.

Were the chains moveable, the difficulty of keeping them clean (the links setting and getting kinked) would be much reduced. The galvanised chains answer better than the others, keeping clean, the links never setting, and hitherto they have not shown any disposition to break.

4. "*As to the Running out Gear.*"—I find the guns are easily run out, and the compressors have complete control over the guns (though of course they require to be understood and properly adjusted).

5. "*As to the Training Gear.*"—1st. The rear training answers well, but the training numbers are rather in the way of No. 1; also in case of ships with small beam, there is not sufficient room in the rear of the guns, when the handles are shipped, to allow any gangway for the supply of shot, &c. I should recom-

mend a small moveable platform to be hooked on the rear of the slide to the left, and clear of training numbers, on which No. 1 could stand. This is more necessary, as few men are tall enough to take aim along the sights of a 9-inch gun.

2nd. The side training gear answers very well. It is open to the objection in this ship (with the ports only 16 feet from centre to centre), that two adjacent guns cannot be trained in opposite directions, farther than to command an arc of two points, one before, and one abaft the beam.

In ships with ports farther apart, this objection would not occur.

6. "*Securing Bolts.*"—I find the securing bolts on the carriages are not sufficiently strong, and recommend that these bolts should be larger, and fitted with shoulders placed towards the strain. Three have been knocked off by the compressor lever and tripper, in consequence of their being connected with the slide clutches. I should therefore recommend their being placed higher on the carriage, viz., in line with the trunnion boxes.

7. Rolling returns have been filled up, and forwarded agreeable to the instructions.

8. It is highly necessary painted canvas covers should be fitted to go over the guns and *under the slides*, to protect the complicated gear from the unavoidable wetting by salt water, and clogging from coal dust when coaling.

9. The "*Bellerophon*" having been so constantly reported on, and having on all occasions behaved so satisfactorily, with the exception of being a dull sailer, which I attribute to the small area of canvas in proportion to her weight, and also to the screw being of so fine a pitch as to offer much resistance, I have no opinion to offer, or suggestion to make with respect to the ship, called forth by anything that I have noticed on the present cruise.

10. It has occurred to me it would be advantageous were the "*coloured lenses*" fixed in the bows, and the lights arranged independently of them, so that by having an extra lamp to trim and shift, the "*coloured lens*" need never be removed, and hence the risk from breakage or its being absent from its place would be avoided, and the space being larger for the light, it would burn brighter and cause less smoke to cover the back of the lens.

The lens should be fitted to ship and unship, to prevent risk of glass being broken when in harbour, or by concussion from firing of guns.

I have, &c.

Rear Admiral A. P. Ryder,
&c. &c. &c.

(signed) *R. J. J. G. MacDonald*,
Captain.

Enclosure No. 3, in Admiral *Warden's* Letter No. 170, of 11 July 1868.

REPORT on the Cruise of the Channel Squadron from Captain *Goodenough*.

Qualifications of Squadron at Sea.

Sir,

Her Majesty's Ship "*Minotaur*,"
at Spithead, 10 July 1868.

I BEG to offer the following observations on the several points enumerated in your letter of 28th May 1868.

Firstly.—The general handiness of the several classes of ships comprising the squadron.

- A.—Under Steam.
- B.—Weighing from Anchor.
- C.—Under Sail.

A.—For action under steam, the "*Bellerophon*" is decidedly the handiest, as although a long ship, the large surface of the balanced rudder, and the ease with which it can be moved, give her special advantages, which are worth retaining at almost any sacrifice of her manœuvring power under sail. I have no doubt that these advantages would be still greater, and the loss under sail *less*, if the difference of draft of water forward and aft were not so large. The powers of turning of the other ships represent the handiness of each under steam, the "*Minotaur*"

"Minotaur" having a slight advantage in power exerted by her small barrelled wheel and long tiller, over "Achilles" and "Warrior." For *ramming* an enemy the "Bellerophon," having the best turning power and also the form of bow which offers least resistance to entry into an enemy's side, is, I think, the only satisfactory ship of the squadron.

B.—When weighing from an anchor (which it is important to do quickly and well) the "Bellerophon" is the least efficient ship; the "Minotaur" and "Achilles" standing highest, the other ships except the "Pallas" (which is nearly as bad as the "Bellerophon") being about equal. Some difficulty seems to be felt in getting the "Bellerophon's" anchor at all times, and in a seaway this would be increased. Unmooring is by no means an easy task with her form of bow, and it might be altered and improved without impairing its effect as a ram.

The steam capstans attached to such heavy ships as the "Minotaur" and "Achilles," are of great benefit; and in the case of the "Minotaur," the anchor can be weighed under steam without the exposure of a single man.

C.—In manœuvring under sail, the "Warrior," "Defence," and "Achilles" show decided advantage, and would be able to maintain their posts off an enemy's port, under sail; all the others would require a daily consumption of coal. The "Warrior" and "Defence" both raise their propellers, and I think their superiority under sail much due to this fact; and that the high place taken by the "Achilles" would be equalled by the "Minotaur" under similar canvas.

The "Bellerophon," which has the same mid-section, and but little more displacement than the "Prince Consort," and has more square canvas than the latter ship, is slowest and least manageable under sail. I attribute her unmanageableness more to the fact of her sitting five feet by the stern, than to her balanced rudder; and it was remarked lately that her sailing improved during last cruise when she filled her foremost boilers.

Secondly. "The general capability of the ships for fighting guns in a seaway."

I consider that ships for the line of battle, should first be classed according to the weight of their bow fire in line with the keel, as I believe that that fire would begin, and form the chief mode of continuing an engagement with iron clad ships.

In this view, all the ships of the squadron are, without exception, weak and unsatisfactory.

The following table, in which, for the sake of illustration, I have included the "Lord Warden" and the "Lord Clyde," shows the armament in line with keel, I do not include "Pallas" battery, as I consider her's an objectionable arrangement. It takes three minutes to shift one of her guns from broadside to bow, or *vice versa*, and these guns may either be considered as broadside, or as guns fighting at 11° from keel, but certainly not in both positions.

Name.	Guns.		Energy at 500 Yards.	Remarks.
	Upper Deck.	Main Deck.		
Minotaur - - -	2	-	2,282	Under armour.
Achilles - - -	1	-	1,141	
Warrior - - -	2	-	2,282	
Bellerophon - - -	-	2	2,282	
Defence - - -	2	-	2,282	
Prince Consort - - -	2	-	2,282	
Royal Oak - - -	2	-	2,282	
Lord Warden - - -	1 9-in.	2	4,675	Two under armour.
Lord Clyde - - -	2	2	4,564	- - Ditto.

I have not mentioned the stern armament, because, firstly, it can easily be arranged in any ship, for a special purpose; and, secondly, a defensive stern fire will rarely be required in steam ships, probably only when disabled or aground.

By this table it appears the "Lord Warden" and "Lord Clyde" are the only two ships yet armed which possess an effective bow fire. I consider them in consequence the most effective ships yet armed for action in smooth water. The "Minotaur" is (besides these two) the only ship whose bow guns are protected by armour.

Capability for working guns on the *broadside* in a seaway may be estimated by the amount of rolling of different ships, in which respect they stand as follows :

Calling 10 perfect steadiness, or the highest attainable in a ship, and 6 the steadiness which is sufficient to secure fair steadiness and immunity to hull below armour plating from enemy's shot then :—

Order	Names.	Standard of Comparison.	Remarks.
		10 —	Immunity from enemy's shot in moderate weather below armour.
1	{ Minotaur - - - - }	9	
	{ Achilles - - - - }		
2	Bellerophon - - - -	8	
3	Warrior - - - -	7	
4	Defence - - - -	6	
	{ Prince Consort - - - }	4	Can be pierced by the enemy's shot below armour in mode- rate weather.
5	{ Royal Oak - - - - }		
	{ Pallas - - - - }		
6	{ Lord Warden - - - - }	3	
	{ Lord Clyde - - - - }		

If the result of my opinion be expressed in a tabular form, I should class the ships on the following order of merit for the line of battle, awarding 50 *Nos.* for extreme excellence in manœuvring under steam, 10 *Nos.* for celerity in weighing from anchor, and proceeding on service, 15 *Nos.* for maintaining position in blockading an enemy's port, and 25 *Nos.* for capability for working guns, of which 15 *Nos.* are awarded for extreme excellence of bow fire in line with keel, &c. &c.; adding a column for cost rather than size, to assist the comparison between the ships which are intended to be of equal force.

SHIP.	Cost.	Comparative Handiness for Manœuvre. 50.	Ability to work Guns. 15 Bow, 10 Broad-sides.	Weighing and Proceeding. 10.	Maintaining Position under Sail. 15.	Defence to Vital Parts. 40.	Defence to Guns in Broadside. 15.	Time able to keep Sea, measured by Coal Stowage. 40.	TOTAL. — 195.	Remarks.
	£.									
Minotaur - -	462,500	15	17	10	4	35	13	10	104	
Achilles - -	458,500	14	15	10	12	35	10	15	111	
Warrior - -	361,000	13	12	8	14	15	10	16	88	
Bellerophon -	459,098	35	15	4	3	30	10	15	112	
Lord Warden -	409,000	25	20	4	3	15	13	18	98	
Lord Clyde -	341,000	25	20	4	3	12	13	15	92	
Prince Consort -	250,000	25	10	8	4	15	10	5	77	
Royal Oak -	260,000	25	10	8	5	15	10	5	78	
Defence - -	241,000	20	12	8	10	10	10	15	85	
Pallas - -	not included, being so much smaller, and not fit for comparison.									

This tabular comparison is of course rough and arbitrary, and is merely put forward as an attempt to reply concisely on the merits of ships presenting many points for observation, some of which are inherent in their class, while others are independent of classification.

It will be observed that I have omitted *speed* and *offensive power of whole* armament, these being dependent on increased displacement and engine power, and therefore the total is not meant as an absolute comparison of each individual ship. It may be taken to compare the first five whose speed is in excess of what is wanted for line of battle.

3. Remarks on the running in and training gear of 7 and 9-inch guns.

My attention has been drawn to the following plans for training :—

1. Rear training gear on double-plate carriage.
2. Side training gear on double-plate carriage (in “Bellerophon”).
3. Fixed training winch, with chain.

On the first and third of these I reported my opinion last year, that the first was the only practicable plan of moving the gun under all circumstances of firing; but that the circumstance of the winch being in the rear of the slide, and in the way of No. 1, was a bar to its being used on service.

The second plan (above) appears to be as good as the first in every way, and to be free from the above objection; and I therefore think it worthy of adoption, but not until the test, height, size, and power of crank and wheel shall have been established by trials.

A gun-tackle purchase with iron blocks, which has been supplied with the S running in wheel, is a decided improvement on the former training whip; the training is as quick, and far more easy and steady.

For running in I have watched a plan of rope winch in a 9-inch gun, the same on a 7-inch gun, and two plans of running in with a pitched chain, for 9-inch guns; I am of opinion that the rope winches are in every way superior to the chains. They are perfectly simple, safe, effective, and inexpensive for either the 9-inch, or 8-inch, or 7-inch gun; while the chains are complicated, dear, difficult to repair and keep in order.

The plan on which the chain is fitted to the double-plate carriage is unsafe and most objectionable, and was the cause of an accident in the “Bellerophon,” which would probably frequently occur, even with a trained gear crew. Of the two plans of rope winch, I prefer the form (S) of that at the 7-inch gun, as it wears the rope less and gives a better hold, whilst the rope is also more easily taken off; and I should recommend that the diameter of wheel of that at the 9-inch gun be increased to 22 inches, retaining the same proportional power as now. Some of the details of the plan on the 7-inch gun, with S wheel, are to be preferred to that of the plan on the 9-inch gun, such as the bollards and the fixed sheave for running in, but I recommend the paul and rim of that at the 9-inch gun to be adopted.

The winch of the S plan might be much lightened, and the attachments of both systems to the slide should be more rigid.

To work 9-inch guns freely, and to fire one gun extreme trained while its neighbour is in and loading, at right angles to the keel, a minimum of 18 feet from $\odot$ port to port is necessary when fitted with toothed rack on the deck, and 20 feet with the fixed training winch and chain.

For a 7-inch gun with training tackles, 15 feet 6 inches is the minimum of distance required. An overhead rail for loading 9-inch guns fitted by Mr. Cunningham, has now had a year's trial. It could not be fitted entirely as was wished, on account of the curve of the upper-deck beams. Still it is a very excellent plan, and were it not for the reasons stated above, I should prefer it very much indeed to the ordinary loading whip. I recommend it being fitted in any ship where the height of the beams admit. It must be borne in mind that unless the present loading whip be unhooked every round, the angle of elevation allowed by the port is practically diminished by about $2\frac{1}{2}$.

I have already reported specially on the great advantage of the hollow rollers fitted to a 9-inch gun, which have stood the test of three months constant wear, and seven rounds of battering charge with high elevation 8° to 10° .

REMARKS on other Points of Details.

Rifle or Conning Towers, or Screens.

I CANNOT see any advantage in the towers of the "Bellerophon" and "Warrior" except under close continued fire of batteries, and think that the protection afforded by the half towers on each side of the "Lord Warden" will be found the best compromised for action at sea. They should be rather larger, and only thick enough to turn heavy grape.

It would be advisable to contrive a rifle screen for a post of observation in the main-top, and to carry thence to the battery and conning post on deck, within the hollow mast or voice pipe, and a simple rod and pointer to indicate the bearing and distance of the object under fire.

The Defence of the Upper Deck.

One $4\frac{1}{2}$ howitzer, loaded with double case, is better for the defence of the deck than 30 rifles, and offers but little mark to an enemy. Each one of the large ships should have four light guns of this description for repelling boarders.

In my opinion light rifled howitzers are far more useful for boat and field service than the heavy longer ranging guns now in use.

In replying to the last paragraph of your letter, it appears to me to be not out of place to notice the turret system. So many of the circumstances of a future naval engagement depend on the use of the hitherto untried arms and defences, that reasonable projects of untried plans, demand almost as much attention as completed systems, which are felt to be very imperfect, though the result of many years' labour and experience.

It is probable that the duty to be performed by our armoured ships, in a war with either great naval powers, "France" or "America," will be:—

1st. Protection of our Colonies and military stations and attack on those of the enemy.

2nd. Blockade of an enemy's port containing ironclads.

3rd. Attack on an enemy's squadron, conveying troops or supplies, or proceeding to attack our Colonies.

For the first duties, it is, I believe, generally held that the turret system is the best that can be devised, on account of the complete defence it offers and the ease it affords of fighting heavy guns.

In the second case it would be absurd to suppose that an inferior class of armoured ship, unless in very superior numbers, could stop the exit and ravages of a superior class. The turret ship in port can choose her weather, and can come out to attack at her own time. She can only be blockaded by a *turret-ship*.

There remains the case of a real sea fight between fleets. Ships for this purpose, to be efficient for the varied and extensive range of sea duty they will have to perform, should have high speed, quick turning power, heavy armament, and great stowage of fuel.

As it is not possible to combine these several qualities under heavy armour, and as speed and handiness are in themselves means of defence as well as attack, the course to be adopted seems to me to be to give up the protection of the battery altogether (except athwart ships traverse to prevent raking), and to confine the armour to a belt at water line, and, in iron-built hulls, to leave the smaller compartments forward unprotected, as far as economy of weight is practicable with safety.

The *bow* of such a ship should carry the heaviest guns behind the traverse, to fire in line with keel. Stern armour and armament is only necessary in special cases.

When chased by an enemy, it will be quite clear by the time he is within range whether he will be able to close, and if so, the pursued ship will do well to act on the offensive if he means to fight at all.

The

The turret ship and the belted ship are therefore the two classes which I consider would best perform all the duties of protected ships, and I think that ships armoured on the broadside lose both powers of offence, viz., motion and armament, for the sake of doubtful and partial protection against enemy's shot.

I have, &c.
(signed) *J. G. Goodenough,*
Captain.

Rear-Admiral Frederick Warden, C.B.,
&c. &c.
Commanding Channel Squadron.

Enclosure No. 4, in Admiral *Warden's* Letter, No. 170, of 11 July 1868.

REPORT ON the various Qualities of the Ships in the Squadron, and of "Royal Oak" in particular, from Captain *Hillyar*.

Her Majesty's Ship "Royal Oak,"
at Sea, Lat. 49° 20', Long. 7° 11' W.,
4 July 1868.

Sir,

IN reply to your letter of the 28th May last, directing me to pay special attention to and report on the following points, I have the honour to state,—

First.—As to the general handiness of the several classes of ships composing the squadron, and which class in my opinion presented the greatest advantages for ensuring speedy evolutions, and for giving effect to ramming or otherwise: The fleet never having been put at full-speed evolutions, I have had no opportunity of making correct observations on the subject; but that it appears to me that the "Royal Oak" and "Prince Consort" class turn very much quicker than the larger ships, and therefore the best for ensuring speedy evolutions, and for the same reason giving an effect to ramming, the "Minotaur" and "Warrior" in our column taking so much longer. On an average, the "Royal Oak's" helm was never put over more than 20° (mean) in turning the eight points.

Secondly.—As to the general capability of the ship under my command for fighting her guns in a seaway, as compared with others: From her rolling propensities there is no doubt she would fight her guns under great disadvantages, as the "Minotaur," "Achilles," and "Bellerophon" were in comparison quite steady, while the "Royal Oak" was rolling from 26° to 40°.

Thirdly.—As to the working of the running-in and training gear, &c. The fitments of the "Royal Oak's" 9-ton iron gun-carriages are of the old pattern: the *nipping* and *clutch* arrangements connecting the running-in chain with the carriage are so bad, that in a seaway no two men can work the lever properly or control the guns with *their whole force*.

II. The efficient working of these guns would, in my humble opinion, be very much increased if mounted on carriages fitted with the *present* service arrangements for nipping and running-in chain gear.

III. The compressor fittings are very good.

IV. With respect to the training gear, nothing could be worse than the present fittings, which I consider quite unsafe for working the guns in a seaway. The training strops, as suggested in a former letter (1 June 1868) would remedy the defect on the main deck, provided *gins* instead of wooden blocks were supplied for the double training tackles used at the 9-ton guns.

V. The single preventer ropes for the 6½-ton guns are not sufficient purchase for exercising purposes, but as running-in gear has been ordered for six of them, I trust the same will be extended to all in good time.

effect to ramming," I should undoubtedly prefer the quicker turning ship for that mode of attack ; but believe when the time comes for searching an enemy's ribs, more will depend on the captain seizing his happy opportunity, and having nerve and stomach to dash in boldly, than on the length of the ship he may command.

Wooden vessels not built in compartments cannot be such desirable rams as those that are so constructed, and thin-bowed ships, such as "Warrior" and "Defence," would probably run to their own destruction. Under this head it may be remarked, that the longer the ship the greater the surface exposed to the enemy's charge, and I suppose a home-thrust into one's quarter or bow would as surely set aside one's immediate fighting effectiveness as would utter destruction by a more fatal smash right amidships.

In reply to paragraph 2, requiring my opinion on the general capability of the "Achilles" for fighting her guns in a seaway, as compared with others, it is evident our fine-weather cruise has not afforded data sufficient to make a suitable comparison ; but I gather from such as it has, that, owing to their moderate rolling, "Minotaur," "Achilles," and "Bellerophon" are nearly equally good in this respect, all three much superior to any others of the squadron ; and, in continuance of the comparison to "Warrior," I should award only a fair second place, putting "Defence" and "Prince Consort" third, "Pallas" and "Royal Oak" last. No doubt the rolling returns will prove of more service than opinions on this point.

In reply to paragraph 3, copy is enclosed of my report on the subject, dated 18 December last. Nothing during the late cruise having occurred to alter the opinions therein embodied, I beg to call your attention to the last paragraph of this report.

Paragraph 4. Rolling returns have been filled up as ordered, and duly transmitted.

In reply to your last paragraph, I submit that the "Bellerophon," owing to her moderate length, extraordinary facility of turning under steam, and heavy battery, and seeing that her steadiness of platform (as no doubt the rolling returns will show) is as nearly as may be equal to that of either the "Minotaur" or "Achilles," must be pronounced the most formidable vessel of the squadron. Unfortunately the late cruise has been altogether in fine weather and smooth water, and we have had no form of vessel other than broadside ships on which to remark ; but I should recommend the adoption of a certain number of turret vessels capable of mounting far heavier guns than any known in the late squadron, besides some few rams, purely as rams ; not with the idea of substituting turrets for broadsides, but with the view of strengthening England's fleets ; in short, as regards the form, armour-plating, rig, and armament of Her Majesty's war ships, I would adopt the old saying of "not putting all one's eggs into one basket."

I have, &c.

Rear Admiral Frederick Warden, C.B.,
&c. &c.
Commanding Channel Squadron.

(signed) E. W. Vansittart,
Captain.

H. M. S. "Achilles," Plymouth, 18 December 1867.

ANSWERS, &c., to Questions set forth in a confidential Communication from the Lords Commissioners of the Admiralty, with reference to Trials of Guns, Carriages and Slides, &c.

Numbers to be given to Carriages as under.

1. Service single plate carriage and slide with rear training gear, &c.
2. Service single plate carriage and slide, with screw training at side, &c.
3. New box girder carriage, &c.
4. Box girder carriage, &c., box girder slide, &c.

Answer.—None on board "Achilles."

Height, &c. of Slide.—(Answer.) The "Achilles" has none of the slides enumerated on board. The height of those she has, viz., the service slides for the 9 and 6½-ton guns, has been found to answer well ; but the height of slides must be dependent on the depth of posts and height of port bolls.

Covers could only be conveniently fitted for those parts of the slides which receive little or no injury from coal-dust and salt water. By regular cleaning all the gear can be kept in good working order.

1st. It has been found that with a motion of over 3° each way, and when the water enters the ports, the guns can be fought with advantage over the lower half ports, the roll of the ship bringing the sights on with the object.

2nd. There would be no advantage in raising the height of the gun on board the "Achilles;" on the contrary, by so doing, the rather limited elevation admitted of by the ports would be decreased.

3rd. The advantage gained in firing over the tops of the waves, by increasing the height of the slide, would be so small as to be inappreciable, though no doubt upper deck guns have a great advantage in this respect over those on the main deck.

(Construction of Slide, &c.)—No experience of others than those on board the "Achilles," which have answered well.

(No. 4. Slide.) Not on board "Achilles;" not sufficiently acquainted with to report.

Slide Racers and Rollers.—As fitted in "Achilles" are found to answer.

The Carriage.—No experience of other than those fitted on board "Achilles," which have been found serviceable.

The Compressors.—1st, Armstrong's new compressor upon No. 3 carriage. None on board "Achilles."

2nd. The service compressors upon Nos. 1 and 2 carriages.—The only compressor in use on board the "Achilles" is the service compressor described for Nos. 1 and 2 carriages.

It has hitherto answered well, being powerful and easily handled. It has not yet been tested when firing with much motion; but the levers might be advantageously strengthened, and, if practicable, lengthened.

3rd. The compressor upon No. 4 carriage. None such on board "Achilles."

No means of comparison, being fitted with only one kind of compressor.

Elevating Gear.—The only elevating gear on board "Achilles" is the service gear described for Nos. 1, 2, and 3 carriages. This answers admirably for shifting from one elevation to another: but the clamps do not always hold the gun, often allowing it to run down after firing, and sometimes even by the slight motion in running out. This might be remedied by causing the inner faces of the elevating drums to be left in their rough state, and perhaps the arms of the clamp lever might be lengthened a little with advantage.

Running in and out Chains.—1st, 2nd, 3rd and 4th.—These refer to gear which is not fitted on board "Achilles."

5th.—No gun on board "Achilles" is fitted with a single chain, but such is much required for the 6½-ton guns.

6th.—Yes.

7th.—No knowledge of any other plan. Tackles are insufficient.

8th.—Of wrought iron.

9th.—Should be covered.

Training Gear.—Arrangement of Nos. 1, 2, 3, and 4 slides. None on board "Achilles."

Whether any of these plans should be applied to 9-ton guns?—Yes.

Whether this gear should be applied in the case of small vessels, having only one gun to command both broadsides?—Yes.

Whether this gear should be applied to any other gun of this weight?—Yes.

Compared with Mr. Cunningham's gear?—Have no experience of Mr. Cunningham's gear.

What plan do they recommend for use?—All guns of 6½ tons and upwards, mounted on smooth racers, should have some mechanical training gear. For those capable of a fore-d-aft or bow-and-quarter line of fire, it is absolutely necessary.

^aNo experience of rival plans.

(signed) E. W. Vansittart, Captain.

Enclosure No. 6 in Admiral Warden's Letter, No. 170, 11th July 1868.

REPORT on late Cruise of Channel Squadron, from Captain *Boys*.

Sir,

H.M.S. "Warrior," at Sea, 6 July 1868.

IN compliance with your letter of the 28th May last, ordering me to report on various points connected with the ships now composing the Channel Fleet, I have the honour to state that I have found very few opportunities of watching the movements of individual ships during evolutions, from my attention having been necessarily so closely given to my own, which has been more especially the case through having the "Royal Oak," as senior, stationed ahead of me, which ship answers her helm and screw, shoots ahead, and loses her way much more quickly than the "Warrior," that occasionally the greatest vigilance has been required to keep clear of her, and maintaining the exact station thus rendered extremely difficult. Under these circumstances I beg to report as follows:—

1st. With respect to the first paragraph of your letter, as to the handiness of different classes of ships, I can only say that the "Bellerophon," from her greater steering power, possesses superior advantages for quick manœuvring and ramming, but her bad sailing qualities and apparent unhandiness under canvas, greatly lessen her efficiency as a sea-going ship, and might cause very great delay to a fleet in company with which she may have to make a passage under sail.

I am of opinion that the "Minotaur," "Achilles," and "Warrior," can turn quick enough for all evolutions under steam, and their manœuvring qualities would be improved if they possessed rudder power corresponding to the "Bellerophon."

I do not attach so much importance to ramming as appears to be generally done at present; in a general action it would be entirely a thing of chance, for if a good speed be kept on ships, which should invariably be done in such cases, it would be a difficult matter to strike another vessel with the stem, however long she may be, provided she is on the look-out to avoid it. I also take into consideration the probable injury that would accrue to the ramming ship, more especially should she be fitted with the long-projecting prow, which would certainly be twisted off, and for this reason the three long ships mentioned, obtaining their speed from the firmness of their lines, instead of the excessive force of their engines, possessing stability from their size, sailing well (for the "Minotaur," if rigged the same as the "Achilles," would be equally good), being able to carry a heavier armament than the "Bellerophon," and being fitted with the modern improvements of that ship, are what I believe should be the model for ships of the line of the present day, while smaller rams or turret ships should do the work of frigates, &c.

The "Prince Consort" and "Royal Oak" being converted wooden ships, are not likely to be imitated, neither having sufficient steaming speed to compete with the later built ships, and rolling considerably more.

The "Defence" sails well, but is very much underpowered for steaming.

The "Pallas" appears to be a large ship to carry so few guns, and has not exhibited any special qualities, either under steam or sail, and is not able to fight guns ahead even in a moderate sea.

With respect to my own ship, the "Warrior" has proved herself this cruise by far the fastest sailer in the squadron, and with her screw up is as handy as one of her length could be. Her gains on the rest of the squadron, on two sailing trials on a wind, are shown in the margin. Her improvement on the "Achilles" since last sailing trials off Lisbon I attribute to the following causes: viz., her screw being up (whereas last trial it was only raised for the last hour), being nearly the same time out of dock, having nearly the same quantity of coals on board (formerly she had more than 100 tons in excess of "Achilles"), being in better trim (having been gradually able to get her by the stern), and having the sails better set this time than ever they were previously.

In steaming and evolutions the "Warrior" generally appeared to turn quicker than the "Minotaur," but her speed cannot be expected to come up to former commission, on account of the reduction of pressure, and the boilers beginning to show decided symptoms of age.

	20 June 1868.	29 June 1868.
	<i>Yards.</i>	<i>Yards.</i>
On Defence -	3,800	7,159
" Pallas -	4,465	9,928
" Achilles -	4,695	7,043
" Royal Oak -	5,641	10,647
" Prince Consort	5,737	17,023
" Minotaur -	6,139	15,549
" Bellerophon -	11,432	19,004

The great defect of the "Warrior" as a fighting ship is, undoubtedly, the fact of the vulnerability of the rudder, tiller, &c.

The being unarmoured outside the battery, I should not consider of such moment, were it not for the steering apparatus being exposed, as in the event of those parts receiving any damage from shot or shell, or even being rammed, the result would only be the filling of the compartment.

I still hold to raising the propeller, instead of disconnecting, as the superior sailing of the "Warrior" and "Defence" is to be greatly attributed to that cause, not so much perhaps from impeding the ship's progress, as from preventing the water acting on the rudder, thus rendering steering so difficult with screw down.

2nd. The whole of this cruise there has been no time in which the "Warrior" could not have fought her guns without shipping water of any consequence, and I think her rolling returns will compare more favourably with the other large ships, as I believe they are at this time made out on the same principle. Her rolling is very peculiar; in light wind, with a slight swell, she will sometimes start rolling for several minutes without any sufficient apparent reason, and will then be perfectly steady for hours; whereas otherwise in a really heavy swell she will scarcely move, but it must be a very high sea that will prevent her fighting her guns when another ship could. She has a great disadvantage in having whole ports, whilst the other ships of the squadron have half ports, over the lower half of which I believe most can work their guns.

The two bow guns working through the embrasures on the upper deck, answer thoroughly; at the last practice a target was sunk right ahead by one of them.

My opinion is, that the "Warrior" under both steam and sail, is faster than any other ship in the fleet, and I attribute this superiority to the fineness of her midship section.

Undoubtedly the "Achilles" rolls less, through being flatter in the floor, and though she might not be able to fight her guns longer than the "Warrior," she would make better practice, through having a more steady platform.

3rd. There is no training gear fitted on board the "Warrior," nor do I consider any absolutely necessary; the four 8-inch, 9-ton guns are fitted with "Scott's running-in gear," which answers satisfactorily.

The compressors have always controlled the guns during this cruise, and I believe them to be quite sufficient at all times.

The present preventer ropes, as supplied, are not long enough, and in fact at no time, even with only two degrees of heel, are they of sufficient purchase to run in the guns at exercise with whole crews.

A gun on the upper deck has been fitted with running-in whips and winches, according to Captain Hood's plan, which are very good for running-in and out, but not so well for traversing and training. I would only recommend a slight alteration in the formation of the flange of the winch, which should be flat instead of indented, as it frequently happens in running out that the rope catches the lip and falls outside, instead of into the groove, owing to the side tackle bolts being at some distance from the port.

The bollards fitted to the carriage and slides are extremely useful, and keep the guns completely under control.

I consider all 6½-ton guns should be fitted with Captain Hood's running-in and out gear, if no cheaper plan can be devised; it might be possible to have the winches to ship and unship quickly, and adaptable to all guns, in order that they might be always shifted to the lee side if required.

During rather a heavy roll, an upper deck gun of 6½ tons, while being eased out by the preventer rope, the standing part slipped, and the gun ran out by herself with a heavy jerk, the rear part of the carriage jumped upwards of a foot away from the slide, and looked very like going overboard altogether, but without any damage resulting either to the gun or slide; a repetition of this might be avoided by fitting a small catch under the slide.

The decks of all ships should be marked with points and half points, for training, so that guns could be converged on an object and fired simultaneously; to this I attach great importance.

In the last practice on board this ship, two broadsides were fired on this plan, very successfully, although the decks were only roughly marked with chalk.

The eye-bolts that were fitted just before this cruise in the decks under the centre of the slides to hook the train ropes to, I do not consider of any material advantage, as the guns, with the rollers, &c. in good condition, train easily.

4th. The rolling returns have been daily filled up, and are forwarded herewith.

With regard to the evolutions I have witnessed, I still hold to my former opinion, that the square movements in the formation should be abolished whenever possible, and direct movements substituted, more especially in subdivision formations; I allude particularly to signals 053 and 054, the leading subdivisions A. and B. losing so much way in turning eight points, that C. has advanced four cables before B. is clear of his front, has to reduce speed considerably before turning, and loses position entirely, and it is some time before the station is regained.

For uniformity of evolutions, ships of the same class should be kept as much as possible together, as I can judge from having been stationed astern of the "Royal Oak" for two cruises; occasionally it has been a matter of impossibility to keep station with her; if she eases or increases her revolutions, and the "Warrior" does the same immediately, the "Royal Oak" will have gathered or lost her way much quicker, and we have found ourselves either close on board of her, or left astern altogether.

Bow and quarter formations present the most advantageous mode for attack, but require considerable practice and extreme attention in the steerage of the leader, as we have found a yaw in the "Minotaur" has suddenly thrown out the whole column, which were previously in proper bearings and distances.

In one line ahead every second ship should repeat the Admiral's signals.

I would suggest that, should a ship be unable to retain her station, she should inform the Admiral by signal, and no ship should take her place unless ordered to do so, as the Admiral's intentions for the next evolution might enable that ship to regain her station in a flank movement, without disturbing the order of the fleet, as has once happened in the late evolutions.

It is extremely desirable that a tell-tale should be fitted, to show the commanding officer, and the engineer in charge, the exact number of revolutions the engines are making, as in evolutions they must be constantly changing in every ship but the leader; the only method at present of ascertaining it being a sand-glass or watch, through which frequent mistakes occur, and it sometimes happens from this primitive plan that the commanding officer cannot get within two or three of the revolutions required, though the engineer on watch is constantly with the glass in his hand.

Rear Admiral F. Warden, C.B.,
&c. &c. &c.

I have, &c.
(signed) *Henry Boys,*
Captain.

Enclosure No. 7 in Admiral Warden's Letter, No. 170, of 11 July 1868.

OPINION on the Capabilities, &c., of the Ships composing the Channel Squadron,
by Captain May.

Sir,

H.M.S. "Defence," at Sea, 4 July 1868.

In reply to your letter of the 28th of May 1868, I have the honour to make the following report:—

As to the general handiness.

1st. I look upon the "Achilles" as the finest vessel in the squadron, as she is remarkably steady, handy, very fast under steam, sails fairly, and is as manageable under sail as can be expected from a vessel of her great length. From her rolling so little, she would seldom, if ever, expose the unarmoured portion of her bottom, which many of the ships present do several times in a minute. I am well aware the "Achilles" takes a few hundred yards (say 300) more sea-room to perform many of the evolutions; but I consider this a matter of small con-

sequence compared with the advantages gained by the magnificent and steady platform her decks afford to work her guns upon.

2nd. I believe the "Minotaur" possesses the same good qualities as the "Achilles," with the advantage of being more heavily armoured, but with her present rig, and greater length, of course is not such a handy vessel.

3rd. The "Bellerophon" seems a very efficient ship, as she carries heavy armour, has a heavy battery, is handy under steam, possesses moderate speed; she does not sail well, but seems manageable under canvas, and is sufficiently steady to enable her to fight her guns with good effect in a seaway, and being shorter, of course, is a handier vessel for entering harbours and manœuvring, than either the "Achilles" or "Minotaur."

4th. The "Warrior" rolls next less than the "Bellerophon," appears handy under sail, steams well, but has all the disadvantages of great length without plating, and her fore and aft bodies are liable to be set on fire, as is hereafter mentioned in paragraph 8.

5th. The "Royal Oak" rolls like a cask, and I consider could only fight her guns with effect on pet days, when there was neither swell nor sea; she possesses no speed under steam, and is extravagant in coals, sails moderately, but appears to answer her helm, and to be easily handled.

6th. The "Prince Consort" rolls rather less than the "Royal Oak," sails worse, and steams better; I consider neither the "Royal Oak" nor "Prince Consort" by any means efficient ships, owing to their rolling so deep and quickly.

7th. As far as I can judge of the "Pallas," she appears to be a deep roller and to sail indifferently, and I cannot observe any good qualities about her to compensate for a vessel of 2,372 tons carrying but six guns, and I should say from her lively motion could only fight them with efficiency on very fine days, with no swell on.

8th. The "Defence" is comparatively steady compared with the "Royal Oak" up to about ten degrees of rolling, but after that point she appears to roll equally deep, though not quite so quickly; she steams fairly and very economically, is moderately handy under steam, and is manageable to a certain extent under sail, but carries two turns of weather helm on a wind or with a wind on the quarter; she tacks quickly for an ironclad, but badly for a sailing vessel, and wears very indifferently, as under favourable circumstances she is thirteen minutes from putting the helm up until she is before the wind; she is a buoyant ship, and I think a good sea-boat, but I cannot look upon her as a very serviceable man-of-war, as I consider she would be easily set on fire either before or abaft her armour clad battery, and with the example before us of how the Crystal Palace burnt, when the proportion of wood to iron was smaller than in the after and fore bodies of this ship, I have no doubt that the "Defence" would ignite most readily if once set fire to by shell.

As to the capability of fighting the guns in a seaway.

9th. When rolling 27 degrees, water was only shipped once to the extent of a few buckets full on the battery deck, but there was no sea on, only a swell; under the circumstances, we found no difficulty in fighting the guns, and although no targets were destroyed, we could have punished an antagonist with good effect, and I therefore consider this ship would fight her guns only inferior to the "Minotaur," "Achilles," "Bellerophon," and "Warrior."

As to the ramming capabilities.

10th. I am not aware of how many of the other ships have internal bulkheads in their forepart, but considering the strength of the "Defence," and her many compartments, I consider she could ram with good effect.

As to the Running in and Training Gear of the Guns.

11th. It was found that the running in gear exercised perfect control over the heaviest guns when the ship was rolling through an arc of 27 degrees, and I have therefore no suggestion to offer on this subject.

12th. In working the upper-deck guns in line of keel when the ship was rolling, it was found that the train tackles were insufficient to check the guns, there being no means of taking a turn with the full. I would therefore suggest that moveable halyards or normans, with wooden grooved heads, similar to those used for preventer ropes, but with square iron spindles, be fitted through the rear of the slides of upper deck guns, clear of the recoil, on which turns of train tackle falls could be taken, and the normans could be unshipped when not required.

13th. I would suggest that the toes of the elevating lever handspikes and the insides of the lever sockets be left rough when in the turning lathe, that the levers might bite more readily, as I observe they frequently slip.

14th. Running in the guns when exercising on an even keel is very laborious, and I should recommend the use of the side tackles for the purpose, hooking them to the rear loop in the carriage and in the training loop in the slides.

15th. In firing the guns it was found that the clamps for the elevating gear did not bite in a sufficiently powerful manner, and that the elevating arcs ran down, causing delay in relaying the guns when reloaded; this, I consider, could be obviated by the part of the arc inside the clamp being well roughed.

16th. With regard to the last paragraph in your letter, that I should furnish my opinion or offer suggestions on any point relating to the ships, I would briefly remark that I consider three masts as many as we know how to place in any vessel to work her with advantage; that for broadside ironclads, before I experimented on other forms and models, I would reduce the lines, dimensions, &c. &c., of the "Achilles," and see how a vessel of such reduced proportions answered.

17th. I find that when the main sheet is hauled aft, and also when the main tack is hauled aboard, there is left on deck about 14 fathoms of both the lee main tack and the weather main sheet, and in the same proportion forward with the fore tacks and sheets. As the rope is large, it must be expensive, and I consider economy might be practised and efficiency maintained if the tacks and sheets were reduced eight fathoms on each rope, of which six fathoms could be taken from the large end and two from the small, and thereby a saving of 64 fathoms of large and expensive rope would be effected, which is now lying on deck rotting. In recommending this reduction, I have taken into consideration setting reefed courses, and I suppose this ship requires tacks and sheets of as great length as most large vessels.

Lastly, I would suggest, as a trifling addition to the night signal book, that all vessels should show position lights or a single light at the peak when reefing, as in column sailing you may chance to range up to your next ahead, and find his topsails on the lap, and the watch aloft, and no way on the ship, and have difficulty in avoiding collision.

I have, &c.
(signed) C. H. May,
Captain.

"Bellerophon," at Plymouth,
7 July 1868.

SUBMITTED for the information of Rear Admiral Warden, C.B.

(signed) Alfred P. Ryder,
Rear Admiral F. Warden, C.B.,
&c. &c. Rear Admiral.

Enclosure No. 8 in Admiral *Warden's* Letter, No. 170, of 11th July 1868.

REPORT on Cruise of Channel Squadron, from Captain *Armstrong*.

Her Majesty's Ship "Prince Consort,"
Plymouth Sound, 6 July 1868.

Sir,

IN conformity with instructions contained in your letter of the 28th May, I have now, on the expiration of the cruise of the squadron under your command, the honour of transmitting my report thereon.

1st. For general handiness, for ensuring speedy evolutions, and for promptness of execution in giving effect to "ramming," the "Bellerophon," "Royal Oak," and "Prince Consort" possess considerable advantages over the class of longer vessels represented by the "Minotaur" and "Achilles."

2nd and 3rd. The efficiency of the "Prince Consort" as a fighting ship is, on the other hand, much impaired by her rolling propensities.

It is, therefore, the more necessary that the running-in and training gear of her guns should be fitted on the most approved principle.

Several of the guns are now mounted on wooden carriages, and some of the slides have no metal racers to work on, and have various fittings which are becoming obsolete.

It is obvious that the more recent patterns would improve her armament and fighting qualities generally.

4th. In transmitting the rolling returns, I have only to remark that, excepting the "Royal Oak," no other ship has rolled so heavily as the "Prince Consort."

And as you have been pleased to invite my opinion on any subject of importance, I venture to offer some practical remarks on the long and short class of ships of the squadron.

The sailing qualities of the "Minotaur" appear, without exception, inferior to those of the other ships of the squadron. I am under the impression that, were she masted like the "Achilles," her efficiency *under sail* would be vastly improved.

On a wind, the "Bellerophon" has not proved herself equal to either the "Warrior," "Achilles," "Royal Oak," "Prince Consort," "Defence," or "Pallas," and she has on several occasions missed stays.

It is not surprising that even seamen should be impressed and led away (as it were) by the noble appearance and performances of the "Achilles" when under sail, and lose sight of her defects as a fighting ship.

Vessels of her class would undoubtedly, from their speed and stability, take a very important part in any future war, especially for chasing purposes, and for forcing an engagement with a retreating enemy; but once fairly engaged in "close action," and enveloped in smoke, they would, from their length, become an easy prey to short, handy ships, when the stem would most assuredly be freely used, and prove a formidable weapon of offence; more so even than the powerful guns of the present day.

Taking this view of the question, I have come to the conclusion that an efficient fleet should consist principally of ships under 300 feet in length, and not larger than the "Bellerophon."

From all that I have seen of that effective ship, and knowing her defensive power, no doubt exists in my mind (after allowing for certain minor deficiencies) that

that she is the most perfect specimen of an ironclad that has hitherto been in commission.

The rolling of the "Prince Consort" is too serious a defect to pass over lightly. In other respects, she is a serviceable ship, remarkably handy under steam, and stays well.

In action during moderate weather, from her power under steam of turning rapidly, she would take a prominent part and prove herself a formidable adversary. Under sail with the screw connected, or not revolving, she is slow and uncertain in answering her helm, especially on the port tack.

She is leewardly withal, and in bad weather very wet, but as a sea-boat her qualities are good.

I have, &c.
(signed) Wm. Armytage, Captain.

Rear-Admiral Warden, C. B.,
Commanding Channel Squadron.

Enclosure No. 9 in Admiral Warden's Letter, No. 170, of 10th July 1868.

REPORT respecting the general Capabilities of the Ships of the Channel Squadron,
from Captain Lambert.

Sir,

H.M.S. "Pallas," Spithead, 6 July 1868.

IN reply to your letter of date 4th June 1868, directing that in the forthcoming cruise my special attention is called to the following points, viz. :—

1st. As to the general handiness of the several classes of ships composing the squadron, and which class, in my opinion, presents the greatest advantages for ensuring speedy evolutions, and for giving effect to ramming, or otherwise.

I consider that the "Bellerophon" and the "Pallas" are, when under steam, for handiness and performing speedy evolutions, as well as ramming, the best; after which the "Minotaur" and "Achilles."

2nd. As regards the general capability of this ship for fighting her guns in a sea-way, compared with others, I am of opinion, excepting "Bellerophon," "Minotaur" and "Achilles," that the "Pallas" is quite equal to any of the others, and in some respects has an advantage over them, inasmuch as the *lee after gun* can be fought in almost any weather.

3rd. Particular attention is called to the running in and training gear fitted on board the different ships, and to offer suggestions as to what, in my opinion, would tend to improve the general working of gun carriages and slides the running-in gear, as fitted to our battery guns, is, in my opinion, perfect; training gear is not fitted to the guns of this ship, and as I have not seen it worked, I am therefore unable to form an opinion on that subject.

In consequence of tackles being in use for training the guns which, in a sea-way, prove insufficient to control the same, I beg to suggest that for the better training thereof *cogged metal arcs*, if fitted, would answer that purpose, as well as afford the control desired (as suggested in my confidential report on gun carriages of last year).

I would also add that the compressors, as at present fitted, cannot be depended upon, inasmuch as the bringing up of the gun is the exception and not the rule.

4th. Relates to the rolling returns, upon which subject the instructions in connection therewith have been attended to.

500.

5th. After

5th. After paying particular attention to the rolling or pitching of the ship under my command, which may be traced or attributed to the new distribution of weights that has taken place in this ship by their Lordships' order of 19th May last, I am of opinion that no diminution as regards either the rolling or pitching took place during the first three weeks in our cruise, but as the weights decrease from below the rolling is reduced ; her pitching was never great at any time.

Lastly. From the short experience I have had in connection with this or other ships of the squadron, may I respectfully assert that I do not feel myself in a position to offer my opinion or suggestions on any other points.

I have, &c.
(signed) *E. H. G. Lambert,*
Captain.

— No. 2. —

Rear Admiral *Warden* to the Secretary of the Admiralty.

(Forwarding Rolling Returns and Abstracts.)

(No. 175.—Nine Enclosures.)

Sir,

“Minotaur,” at Spithead, 21 July 1868.

I HAVE the honour to forward herewith, for the information of the Lords Commissioners of the Admiralty, the Rolling Returns and Abstracts from the ships of the Channel Squadron under my orders, as named in the margin.

2. These documents are rendered for the period between the 5th June and 5th July 1868 inclusive, and were taken daily during the late cruise of the Squadron, and comprise 132 sheets of Observations and 31 Abstracts.

I have, &c.

(signed) *Fred. Warden,*

The Secretary of the Admiralty,
Whitehall.

Rear Admiral Commanding.

Minotaur.
Bellerophon.
Achilles.
Warrior.
Royal Oak.
Prince Consort.
Defence.
Pallas.

SCHEDULE of ROLLING RETURNS and ABSTRACTS enclosed in foregoing LETTER.

No.	SUBJECT.	PAGE.
1	Rolling Returns, Her Majesty's Ship “Minotaur” - - - - -	46
2	Ditto - - ditto - - “Bellerophon” - - - - -	52
3	Ditto - - ditto - - “Achilles” - - - - -	64
4	Ditto - - ditto - - “Warrior” - - - - -	92
5	Ditto - - ditto - - “Royal Oak” - - - - -	110
6	Ditto - - ditto - - “Prince Consort” - - - - -	128
7	Ditto - - ditto - - “Defence” - - - - -	144
8	Ditto - - ditto - - “Pallas” - - - - -	156
9	Abstracts of Rolling Returns - - - - -	166

“MINOTAUR.”

H. M.'s Ship “Minotaur,”
15 July 1868.

I BELIEVE these Returns to be correct in every particular, but I consider it too much to expect that so many observations, so needlessly repeated on days of equally fine weather, can be trusted at all times in all the ships.

I believe that persons who are accustomed to devote themselves to observations of astronomical or natural phenomena, are careful to confine themselves to a limited number, and to impress on their assistants that nothing which is not recorded on the spot shall be afterwards inserted.

The Pendulum observations I consider as more than useless; they are most likely to mislead.

I suggest that the Batten should be the only instrument used, and that the observations should only be made on selected days.

“MINOTAUR.”

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "MINOTAUR."

[illegible]

"MINOTAUR."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "MINOTAUR."

Pitching, when retained.	Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.			
	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e. whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.				
-	5	8	Yes, 15 hours.	Yes, 9 hours.	-	Screw not disconnected.	All, except mizen, gaffsail, and spanker.	W.	N.N.W. to S.W.	1 to 4	Very slight	-	Ahead	-	Yes	-	Yes	-	All	All	All	All	No clinometer on board; pendulum placed on the wheel standard under the poop; graduated battens on the bridge; bar instrument not used.
-	5 steaming 1 sailing		Yes, 14 hours	10 hrs.	-	"	All, except gaff, mizen, and spanker.	"	W. to N.N.W.	1 to 3	- ditto	-	On bow	-	"	-	No	-	"	"	"	"	
1	1 to 6	0	-	-	Yes	Disconnected the last 12 hours.	All, except mainsail and royals, gaff, mizen, and spanker.	W. by N.	N.N.E.	2 to 6	Slight N.W.	-	ditto	-	"	-	"	-	"	"	"	"	The pitching is the average throughout the day.
1	6	0	-	-	"	Disconnected	Fore and second courses, single reefed topsails, top gallant sails, and jib.	"	N.E.	5	- ditto	-	ditto	-	"	Trimmed	"	"	"	"	"	"	
1	0	0	-	-	"	"	As at 8 a.m., with royals in addition.	"	"	5	- ditto	-	On quarter	-	"	-	"	-	"	"	"	"	Taken by signal. "Royal Oak" rolling very heavily, frequently showing bottom below the armour plating. Remaining ships rolling nothing to speak of.
-	3-5 to 1	0	3-6 hours.	-	20-4 hours. Yes	Connected	All, except gaff, mizen, and spanker.	"	E.N.E.	3	- ditto	-	On bow	-	"	-	No	-	"	"	"	"	
1	0	0	-	-	"	"	All, except second and main courses, and after trysails.	W.	N.	1	Moderate N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
1	0	0	-	-	"	"	None	W.S.W.	N.N.W.	2	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	0	0	-	-	"	"	Mizen trysail	S.W.	N.W. by N.	3	- ditto	-	On beam	-	"	-	"	-	"	"	"	"	Taken by signal. From 9 a.m. to noon. Ship steaming round targets, firing shot and shell.
-	3	0	-	-	Yes	"	All, except mizen, gaffsail, and spanker.	S.W. by W.	N.W.	3	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	3	0	-	-	"	"	ditto	S.W. 1/2 W.	"	3	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	3	0	-	-	"	"	ditto	S.W. by W.	"	3	Long N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
-	2	5	-	-	"	"	ditto	"	"	3	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	3	0	-	-	"	"	ditto	"	"	3	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	3	5	-	-	"	"	ditto	W. by S.	N.N.W.	4	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	3	0	-	-	"	"	ditto	W.S.W.	N.W.	3	Long N.N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
-	0	3	-	-	"	Disconnected	All, except second and main courses, and after trysails.	W.	N.	1	Slight N.N.W.	-	Broad on bow	-	"	-	Yes	-	"	"	"	"	
-	0	0	-	-	"	"	None	W. by S.	Calm	0	Moderate N.N.W.	-	Beam	-	"	-	No	-	"	"	"	"	
-	5	0	Yes	-	"	Connected	None	W.N.W.	"	0	Slight N.W.	-	Broad on bow	-	"	-	"	-	"	"	"	"	
-	6	0	-	-	"	"	None	"	"	0	Moderate N.N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
-	5	8	-	-	"	"	None	"	W.	1	- ditto	-	On bow	-	"	-	"	-	"	"	"	"	Taken by signal. "Royal Oak" rolling 44°, 22 each way.
-	0	0	-	-	"	"	None	"	"	1	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	4	5	-	-	"	"	None	N.W. by W.	N.W.	1	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	5	0	-	-	"	"	None	W.N.W.	"	1	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	5	0	-	-	"	"	None	N.W. by W.	"	1	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
-	0	0	-	-	Yes	Connected	None	W.S.W.	Calm	0	Mod. long N.N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
-	0	0	-	-	"	"	All, except courses and after trysails.	W.S.W.	"	0	Moderate N.N.W.	-	On beam	-	"	-	"	-	"	"	"	"	At 6 p.m. Exercising shifting sails. Rolling not taken. Swell sub- siding.
-	0	0	-	-	"	"	ditto	W.	"	0	Slight N.N.W.	-	Broad on beam	-	"	-	"	-	"	"	"	"	
One	None	None	-	-	"	"	Topsails	"	"	0	- ditto	-	Broad on bow	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	Topsails	"	"	0	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	All, except mizen, trysail, and spanker.	"	"	0	Slight W.N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	ditto	W.N.W.	"	0	Slight	-	On bow	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	ditto	N.W.	"	0	Very slight	-	ditto	-	"	-	"	-	"	"	"	"	"Royal Oak" signalled. Have to-day rolled 25° each way (50°); if rolling 20° thought her guns could be fought. From noon to 3 p.m., scarcely any percep- tible motion. Taken by signal.
"	"	"	-	-	"	"	ditto	W.S.W.	"	0	Very slight N.W.	-	ditto	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	Topsails, top gallant, and royals.	W.	"	0	Very slight	-	ditto	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	ditto	W.N.W.	N.E.	1	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	
"	"	"	-	-	"	"	ditto	W.	Calm	0	- ditto	-	ditto	-	"	-	"	-	"	"	"	"	

100 90 80 70 60 50 40 30 20 10 0

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.																When Ship is under Sail, or not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.								
							Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Batten Instrument.				Clinometer.			Pendulum.			Batten Instrument.					
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.						
											Degrees.															Degrees.	Degrees.	Oscillations per Minute.			
Provisions.	Stores.	Coals.	Forward.	Aft.	Degrees.	Mean Number of Oscillations per Minute.	Degrees.	Oscillations per Minute.	Degrees.	Oscillations per Minute.	Degrees.	Oscillations per Minute.	Degrees.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.								
Saturday, 13 June 1868	Days.	Mts.	Tons.	Ft. in.	Ft. in.	H. M.																									
13 June 1868	35	2	523	-	-	Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2'4	10'	4	'0	8'	2					
Sunday, 14 June 1868	34	2	520	-	-	{ Throughout the day }	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Monday, 15 June 1868	33	2	518	-	-	{ Throughout the day }	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Tuesday, 16 June 1868	32	2	515	-	-	{ Throughout the day }	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Wednesday, 17 June 1868	31 31 31 31	1½ 1½ 1½ 1½	501	-	-	8 0 a. m. 9 0 " 10 0 " Noon	-	-	-	-	1'4	2'1	3'5	6	11'2	-	-	-	-	-	2'1 1'8 2'6	11'2 11' 12'	4 5 4	1' 1' 1'	7' 8' 8'	1 3 2					
Thursday, 18 June 1868	30	1½	497	-	-	{ Throughout the day }	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Friday, 19 June 1868	29	1½	491	-	-	{ Throughout the day }	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Saturday, 20 June 1868	28	1½	479	-	-	8 0 a. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2'2	10'8	4	1'	7'	2					
Sunday, 21 June 1868	27	1½	478	-	-	8 0 a. m. 9 0 " 10 0 " 11 0 " Noon 1 0 p. m. 8 0 a. m. 11 15 "	-	-	-	-	3'	1'5	4'5	5	11'8	-	-	-	-	-	-	-	-	-	1' 1' 1'2 1' .9	8' 8' 8' 8' 7'5	2 2 2 2 2				
Monday, 22 June 1868	26	1½	469	25 4	26 7	11 15 "	-	-	-	-	1'5	1'8	3'3	5	12'6	7	2	9	1'5	8'5	-	-	-	-	-	-					
Tuesday, 23 June 1868	25	1½	465	25 3	26 7	4 0 p. m. 8 0 a. m. 9 0 " Noon 2 0 p. m. 3 0 " 4 0 " 5 0 " 7 0 " 8 0 "	-	-	-	-	1'3	3'6	4'9	8	12'2	-	-	-	-	-	2'9	12'2	6	1'2	8' 8'5 9' 8' 8'5	3 4 4 5 6 6 5 4 3					

"MINOTAUR."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Minotaur"--continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.							
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.						Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.								
Upward.	Downward.																												
-	-	4	4	Yes	-	-	Connected	-	-	None	-	N.W.	Calm	0	Very slight	-	On bow	-	-	Yes	-	No	-	All	All	All	All	Rolling motion scarcely perceptible throughout the day. Steamed for the performance of evolutions.	
-	-	0 0 to 1 8	-	-	Yes	-	"	-	All except mainsail	-	N.	Calm W.	0 to 2	- ditto	-	- ditto	-	-	"	-	Yes	-	"	"	"	"	No appreciable motion this day.		
-	-	0 0 to 2 0	-	-	"	-	"	-	ditto	-	N. to W.N.W.	Calm W.S.W.	0 to 3	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	No appreciable motion throughout the day.		
-	-	0 0 to 5 0	Yes hrs.	-	Yes 20 1 hrs.	-	"	-	-	All	-	W.S.W.	Calm N.E.	"	Slight; irregular	-	On beam generally	-	-	"	-	"	-	"	"	"	"	No appreciable motion. Steamed for performance of evolutions.	
None	None	3 8 5 5	No	No	Yes	-	"	-	-	All	-	"	E.N.E.	5	- ditto	-	Quarter	-	-	"	-	No	-	"	"	"	"	Preparing for action. Sails furled, and engines not moving. No perceptible motion for the remainder of this day.	
"	"	None	None	"	"	No	"	-	-	All	-	N.W. by W.	"	5	Slight	-	ditto	-	-	"	-	"	-	"	"	"	"		
"	"	None	None	"	"	No	"	-	-	None	-	N. by E.	"	5	ditto	-	Beam	-	-	"	-	"	-	"	"	"	"		
1	1	4	0	"	"	Yes	-	"	-	-	All	-	N.W. by W.	"	5	ditto	-	Quarter	-	-	"	-	"	-	"	"	"	"	No perceptible motion for the remainder of this day.
None	None	0 0 to 2 8	"	"	"	-	"	-	-	All	-	"	E.N.E. and calm.	0 to 4	Very slight	-	- ditto	-	-	"	-	"	-	"	"	"	"	No appreciable motion.	
"	"	0 0 to 5 0	Yes hrs.	"	Yes 20 1 hrs.	-	"	-	-	All except mainsail, and royals occasionally.	-	E. by N. to S.	Calm, variable, W.S.W.	0 to 5	- ditto	-	Ahead when steaming, otherwise on quarter.	-	-	"	-	"	-	"	"	"	"	Steamed for performance of evolutions. No motion whatever this day.	
"	"	2	0	No	"	Yes	-	"	-	Single reefed topsails, fore-sail, and jib.	-	W.S.W.	N.W.	5	Slight	-	Bow	-	-	"	-	Yes	-	"	"	"	"	No appreciable motion during the remainder of the day. The ship's maximum inclination 3°. Made a trial of sailing.	
1 1/2	1	1	8	"	"	"	-	"	-	Topsails, and fore and main courses.	-	N.E. by N.	"	4	Moderate	-	ditto	-	-	"	-	"	-	"	"	"	"	Taken simultaneously with other ships, by signal. Squadron performing steam evolutions. No motion exceeding 1° at any other times during this day.	
1	1	1	5	"	"	"	-	"	-	Topsails, and fore and main courses, and jib.	-	N.E.	"	3 to 4	Moderate and subsiding.	-	ditto	-	-	"	-	"	-	"	"	"	"		
1 1/2	1	1	5	"	"	"	-	"	-	ditto	-	N.E. 1/2 N.	"	4	- ditto	-	Beam	-	-	"	-	"	-	"	"	"	"		
1 1/2	1	1	5	"	"	"	-	"	-	ditto	-	N.E. by N.	"	4	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
1 1/2	1	1	5	"	"	"	-	"	-	Topsails, fore and second courses, and jib.	-	N.E.	W.N.W.	3	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
None	None	1	5	"	"	"	-	"	-	ditto	-	N.E. by N.	N.W.	3	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
"	"	0	5	"	"	"	-	"	-	Topsails, fore and second courses.	-	E.	N.	2	Moderate	-	Quarter	-	-	"	-	"	-	"	"	"	"		
1	1	5	0	Yes	"	No	-	"	-	None	-	N.N.E.	N.N.W.	2	- ditto	-	Bow	-	-	"	-	No	-	"	"	"	"		
None	None	2	5	No	"	Yes	-	"	-	All except second course and gaff sails.	-	S.S.W.	W.	3	- ditto	-	Quarter	-	-	"	-	Yes	-	"	"	"	"		
1-5	1	4	0	"	"	"	-	"	-	Double reefed topsails, fore and second courses, and jib.	-	W.S.W.	N.W.	6	Moderate, long	-	Broad on bow	-	-	Topgallant only.	-	"	-	"	"	"	"		
2	1	4	2	"	"	"	-	"	-	ditto	-	S.W. by W. 1/2 W.	"	6	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
2	1	3	0	"	"	"	-	"	-	ditto	-	"	"	6	Moderate	-	ditto	-	-	"	-	"	-	"	"	"	"		
2	1	3	2	"	"	"	-	"	-	ditto	-	S.W. by W.	"	6	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
2	1	3	2	"	"	"	-	"	-	ditto	-	"	"	6	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
2	1	3	8	"	"	"	-	"	-	ditto	-	"	"	6	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
2	1	2	5	"	"	"	-	"	-	Double reefed topsails, and second course topgallant sails.	-	W.S.W.	"	6	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		
1	1	3	5	"	"	"	-	"	-	ditto	-	N.E. by E.	"	6	Considerable	-	Bow	-	-	"	-	"	-	"	"	"	"	In wearing, at 5 h. 20 m., the ship rolled 1° each way.	
1	1	3	0	"	"	"	-	"	-	ditto	-	N. by E.	N.W. by W.	5	- ditto	-	ditto	-	-	"	-	"	-	"	"	"	"		

"MINOTAUR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Minotaur"—continued.

[illegible]

"MINOTAUR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Minotaur"—continued.

Pitching, when ascertained.			Speed.			Whether			Whether with			Wind.			Sea or Swell.			State of Yards.			Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Directions, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.					
1			2	0	No	No	Yes	Connected -	Topsail, foresail, jib, and main trysail.	N.	W.N.W.	3	Moderate	Bow	-	-	Yes	-	Yes	-	All	All	All	All.	Steaming for target practice on various courses, from 9 a.m. to 12.30 p.m. Motion for the rest of this day scarcely appreciable. Horizon obscured by dense fog. No perceptible motion. Horizon obscured nearly the whole day by thick fog. No motion. Horizon generally throughout the day, hidden by fog or mist. No appreciable motion. Steamed for performance of evolutions.
1			6	0	Yes	"	No	-	- None -	N.W. by N.	"	3	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
1			5	0	"	"	"	-	- None -	N.W.	N.W. by N.	4	Slight	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	
1			2	5	No	"	Yes	-	Courses, topsails, and main trysail and jib.	N.W. by N.	W. by S.	3	ditto	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	
-			1	5	"	"	"	-	ditto	"	"	3	ditto	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	
-			2	0	"	"	"	-	Topsails, fore, and second courses.	N.N.W.	W.	1 to 3	None	Bow	-	-	Yes	-	Yes	-	All	All	All	All	
-			0	0	"	"	"	-	Topsails, courses, and jib	N.E. to N.W.	Calm and westerly.	0 to 2	None	Bow	-	-	Yes	-	Yes	-	All	All	All	All	
-			1	2	"	"	"	-	-	S.S.E.	Calm and East.	0 to 5	None	Bow	-	-	Yes	-	Yes	-	All	All	All	All	
-			4	5	No	"	Yes	-	All except royals	N.	E.	5	Moderate	Beam	-	-	Yes	-	Yes	-	All	All	All	All.	
-			4	5	"	"	"	-	- ditto -	N.N.E.	"	5	- ditto -	- Broad on bow -	-	-	"	-	"	-	"	"	"	"	
-			4	2	"	"	"	-	- ditto -	"	"	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			4	8	"	"	"	Disconnected	- ditto -	N. by E.	E. by N.	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			4	8	"	"	"	-	- ditto -	"	"	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			4	5	"	"	"	-	- ditto -	N.N.E.	E.	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			6	0	"	"	"	-	All except royals, topsails single reefed.	N. by E. ½ E.	"	6	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			5	2	"	"	"	-	Topsails single reefed, except main and second courses.	N.N.E.	"	6	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			4	8	"	"	"	-	All except royals and mainsail.	S. by E.	E. by S.	5	Moderate	Little before beam	-	-	Yes	-	Yes	-	All	All	All	All.	
-			3	5	"	"	"	-	All except royals	"	"	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			3	5	"	"	"	-	- All -	"	"	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			5	0	"	"	"	Revolving occasionally.	- All -	S.	"	5	- ditto -	Beam	-	-	"	-	"	-	"	"	"	"	
-			4	8	"	"	"	-	All except royals	S. by E.	"	5	- ditto -	Little before beam	-	-	"	-	"	-	"	"	"	"	
-			4	2	"	"	"	-	- ditto -	N.N.E.	E.	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			4	0	"	"	"	-	- ditto -	"	"	5	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			3	8	"	"	"	-	- ditto -	N.E. by N.	E. by S.	4	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			2	5	"	"	"	-	Topsails, foresail, topgallant sail, and main trysail.	S. by E.	"	4	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			2	0	"	"	"	Disconnected	- ditto -	S. ½ E.	E.	4	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			2	5	"	"	"	-	- ditto -	S. by E.	"	4	- ditto -	- ditto -	-	-	"	-	"	-	"	"	"	"	
1			5	2	0	"	"	Disconnected, not revolving.	All except royals	S.	E.S.E.	4	Slight	Beam	-	-	Yes	-	Yes	-	All	All	All	All.	
1			5	2	0	"	"	-	- ditto -	S. ½ E.	"	4	ditto	- ditto -	-	-	"	-	"	-	"	"	"	"	
1			5	2	0	"	"	-	- ditto -	"	"	4	ditto	- ditto -	-	-	"	-	"	-	"	"	"	"	
1			5	1	0	10 ½ hrs.	13 ½ hrs.	Connected -	- All -	N.N.E. to E. by S.	E.	3 to 5	Slight	Ahead	-	-	Topgallant only.	-	Yes	-	All	All	All	All	
1			5	6	0	Yes	No	-	- None -	E. by S.	E.S.E.	3	Moderate	Ahead	-	-	Topgallant only.	-	Yes	-	All	All	All	All	
-			5	5	No	Yes	"	-	Fore and aft, with fore and second courses.	E. by S.	N.E.	3	Slight	Ahead	-	-	Topgallant only.	-	Yes	-	All	All	All	All.	
-			3	5	"	"	"	-	- ditto -	"	"	3	ditto	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			5	5	"	"	"	-	Fore and aft sails	"	E.N.E.	2	ditto	- ditto -	-	-	"	-	"	-	"	"	"	"	
-			5	8	"	"	"	-	-	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
-			steaming 3 ½ hrs. sailing	12 hrs.	No	12 hrs.	"	-	- All -	E. by S. to E. by N.	North easterly.	3 to 5	Slight	Bow	-	-	Yes	-	Yes	-	All	All	All	All	
-			-	7 hrs.	"	17 hrs.	"	-	- All -	E. by N.	N.	3 to 5	Very slight	Bow	-	-	Yes	-	Yes	-	All	All	All	All	

"BELLEROPHON."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "BELLEROPHON."

Pitching when ascertained.		Speed.		Whether			Whether with		SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	Direction.			Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Directions; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.							
1	1	4	0	-	-	Yes	No	-	All plain sail to staysail, foresail, and fore studding-sail.	W. by N.	N.E.	4	Moderate	-	Beam	-	Yes	-	Yes	-	All	All	All	All.		
2	1	4	5	-	-	"	-	-	ditto	-	-	4 to 5	-	-	-	-	-	-	-	-	-	-	-	-		
2	1	5	0	-	-	Yes	-	-	All plain sail to staysail, foresail, and fore studding-sail.	W. by N. 1/4 N.	E.N.E.	5	Moderate	-	Starboard quarter	-	Yes	-	No	-	All	All	All	All	Taken per signal from senior officer for five minutes.	
Bottom not exposed during.	0	0	-	-	-	"	Connected	-	Foretopgallant sails	S.E.	E.N.E.	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"	Taken hourly for five minutes.	
	4	5	-	-	-	"		-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
	0	0	-	-	-	"		-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
	3	0	-	-	-	"		-	ditto	N. 3/4 E.	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	0	0	-	Neither	-	-	-	None	West	Northerly	1	ditto	-	Port beam	-	"	-	"	-	"	"	"	"	After this no perceptible motion.	
1	1	0	0	Yes	-	-	-	-	ditto	East	Westerly	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"	Taken per signal from senior officer for five minutes, ship with all sails furled.	
1	1	0	0	"	-	-	-	-	ditto	"	"	"	ditto	-	Starboard beam	-	"	-	"	-	"	"	"	"	Firing at a target, working engines as requisite. The heaviest roll recorded was after firing a concentrated broadside.	
1	2	0	-	-	-	Yes	-	-	Topsails and fore course	S.W.	N.W. by W.	2	Long	-	Two points abaft starboard beam.	-	"	-	Yes	-	"	"	"	"	Taken hourly for five minutes.	
1	2	5	-	-	-	"	-	-	Topgallant sails and fore course.	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	2	5	-	-	-	"	-	-	All plain sail	W.S.W.	N.W.	"	ditto	-	On the beam	-	"	-	"	-	"	"	"	"		
1	6	0	Yes	-	-	-	-	-	None	W.N.W.	Calm	0	Considerable	-	On starboard bow	-	"	-	No	-	"	"	"	"		
1	0	0	-	-	-	Yes	-	-	All plain sail	S.W.	"	0	Moderate	-	Beam	-	"	-	"	-	"	"	"	All	Per signal from senior officer.	
1	0	0	-	-	-	"	-	-	ditto	-	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	Taken hourly; spring of chronometer broken therefore could not register the roll half-hourly.	
1	0	0	-	-	-	"	-	-	ditto	-	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	Topsails	West	"	"	ditto	-	Starboard bow	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	0	0	-	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"					

“BELLEROPHON.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Bellerophon”—*continued.*

[illegible]

"BELLEROPHON."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Bellerophon"—continued.

Pitching when ascertained.	Speed.			Whether			Whether with			SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
	Forward.	Aft.	Degrees.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	Direction.	Force.			Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.								
0	0	0	0	-	-	Yes	-	-	-	-	-	-	-	Moderate	Beam	-	-	Yes	-	No	-	All	All	All	All.	Instruments compared by simultaneous observations.	
-	-	0	0	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	0	5	-	-	"	-	-	-	-	-	-	-	ditto</													

"BELLEROPHON."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Bellerophon"—*continued.*

DATE	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.																	When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.											
							Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Batten Instrument.				Clinometer.			Pendulum.			Batten Instrument.									
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.		Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.					
																															Degrees.				Degrees.
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																														
21 June 1868	93	2½	350	21 4	26 5	4 0 a.m.	-	-	-	-	-	4	1	5	12	10	-	-	-	-	-	-	Not working			-	-	-	-	3'	8'	35 N.			
						5 0 "	-	-	-	-	-	3	1	4	10	10	-	-	-	-	-	-	-	ditto			-	-	-	-	3'	8'	45 "		
						6 0 "	-	-	-	-	-	3	2	5	9	10	-	-	-	-	-	-	-	1	9	4	-	-	-	-	2'7	8'	35 "		
						7 0 "	-	-	-	-	-	3	1	4	11	10	-	-	-	-	-	-	-	1	10	4	-	-	-	-	1'	8'	15 "		
						8 0 "	-	-	-	-	-	3	1	4	8	11	-	-	-	-	-	-	-	2	10	4	-	-	-	-	1'	9'	18 "		
						9 0 "	-	-	-	-	-	3	1	4	10	12	-	-	-	-	-	-	-	1	10	3	-	-	-	-	6'	8'	15 "		
						10 0 "	-	-	-	-	-	3	1	4	8	12	-	-	-	-	-	-	-	Not working			-	-	-	-	1'	8'	25 "		
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9	5	3	11	8	1'	8'	15 "			
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	11	5	3	12	7	1'	8'	15 "			
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9	3	3	12	8	1'	8'	25 "			
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Not working			-	3	12	8	8'	8'	25 "	
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	6	3	12	7	8'	9'	15 "		
4 0 "	-	-	-	-	-	-	-	-	-	-	3	1	4	7	10	-	-	-	-	-	-	-	-	-	1'	9'	15 "								
22 June 1868	92	2¼	337	21 4	26 5	4 0 a.m.	-	-	-	-	-	1	1	2	6	11	-	-	-	-	-	-	ditto			-	-	-	-	8'	9'	15 N.			
						5 0 "	-	-	-	-	-	2	1	3	7	11	-	-	-	-	-	-	-	ditto			-	-	-	-	8'	9'	15 "		
						6 0 "	-	-	-	-	-	2	1	3	8	10	-	-	-	-	-	-	-	ditto			-	-	-	-	1'	9'	15 "		
						7 0 "	-	-	-	-	-	3	1	4	11	11	-	-	-	-	-	-	-	-	ditto			-	-	-	-	5'	9'	15 "	
						8 0 "	-	-	-	-	-	2	1	3	7	11	-	-	-	-	-	-	-	-	ditto			-	-	-	-	8'	9'	15 "	
						11 24 "	1	-	1	2	12	2	1	3	7	10	4	-	4	15	9	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Not working			-	4	9	8	1'	9'	25 Pt.	
						6 0 "	-	-	-	-	-	1	3	4	8	8	-	-	-	-	-	-	-	-	ditto			-	-	-	-	1'2	9'	25 "	
						7 0 "	-	-	-	-	-	1	3	4	8	9	-	-	-	-	-	-	-	-	-	ditto			-	-	-	-	1'3	9'	28 "
						4 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	9	5	3	9	7	3'7	9'	45 "		
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	3	3	11	7	3'7	9'	5'	5'		
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10	3	5	10	10	3'	9'	48 "	48 "								
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10	5	3	10	8	3'1	9'	48 "	48 "								
23 June 1868	91	2¼	328	21 4	26 5	9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	11	5	6	11	11		9'	5'	5'		
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	12	5	6	12	10		9'	5'	5'		
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	10	9	8	11	12		9'	65	65		
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	10	7	10	12	Lost.	9'	65	65		
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	8	7	6	9	9		9'	6'	6'		
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	11	8	8	12	12		9'	7'	7'		
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	10	7	7	10	12	4'7	8'4	55	55		
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	10	9	7	10	10	4'1	8'4	55	55		
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	9	8	6	9	10	3'6	9'	4'	4'		
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	10	6	5	8	9	2'6	8'	3'	3'		
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	11	8	4	10	9	2'7	9'	35	35		

"BELLEROPHON."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Bellerophon"—continued.

Time when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees.																							
2	2	3	5	-	-	Yes	Screw disconnected, but not revolving.	Double-reefed fore and main topsails, topmast, staysail and trysails.	N. by E.	W. by N.	7 to 4	Considerable	Weather beam	-	Yes	Yes	None	All	All	All.	From 4 a.m. until 10 a.m. Pendulum only, indicating weather roll.		
2.5	3	2	5	-	-	"	"	ditto	N.E.	W.N.W.	"	ditto	ditto	-	"	"	"	"	"	"			
2	2	1	5	-	-	"	"	ditto	N.E. by E.	"	"	ditto	ditto	-	"	"	All	"	"	"			
2	2	1	0	-	-	"	"	ditto	N.E.	"	3	Considerable, short	ditto	-	"	"	"	"	"	"			
1.5	1.5	0	8	-	-	"	"	Topsails, courses, and main trysail.	N.E. by N.	N.W. by N.	"	ditto	ditto	-	"	"	"	"	"	"			
1	1	1	0	-	-	"	"	ditto	"	N.W.	3 to 5	ditto	ditto	-	"	"	"	"	"	"			
1	1	0	8	-	-	"	"	Topsails and courses	"	"	"	ditto	Weather quarter	-	"	"	"	"	"	"			
1	1	1	2	-	-	"	"	ditto	"	N.W. by N.	"	Moderate	ditto	-	"	"	"	"	"	"			
1	1	1	2	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.5	1.5	1	6	-	-	"	"	ditto	N.E. ½ N.	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.2	1	1	8	-	-	"	"	Topsails and foresail	N.E.	N.N.W.	"	ditto	ditto	-	"	"	"	"	"	"			
1.5	1.5	3	8	-	-	"	"	ditto	"	N.W.	3 to 4	Slight	ditto	-	"	"	"	"	"	"			
1	1	3	5	-	-	"	"	Topsails, jib, and foretop staysail.	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
2	1.5	0	5	-	-	"	"	Double-reefed topsails, topgallant sails, jib, and staysail.	"	"	1 to 2	ditto	Weather beam	-	"	"	"	"	"	"			
1.5	1.5	0	5	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.5	1	0	5	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.2	1.2	0	5	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.2	1	5	0	Yes	-	-	"	None	N.N.E.	N.N.W.	2	ditto	Port bow	-	"	No	"	"	"	"			
1	1	2	0	-	-	Yes	"	Topsails and jib	S.S.W.	West	4 to 5	ditto	Weather beam	-	"	Yes	"	"	"	"			
1.3	1.3	1	0	-	-	"	"	Double-reefed topsails, foresail, and topgallant staysail.	"	"	"	ditto	ditto	-	Topgallant yards only.	"	"	"	"	"			
1.2	1	4	0	-	-	"	"	Double-reefed topsails and courses.	S. by W.	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.4	1.4	4	0	-	-	"	"	Double-reefed topsail and foresail.	S.W. ½ W.	N.Westly.	5 to 6	"	Weather bow	-	"	"	All battery ports.	All battery ports.	"	"			
1.3	1.3	4	5	-	-	"	"	ditto	S.W. by W.	"	"	"	ditto	-	"	"	"	"	"	"			
1.3	1.2	4	5	-	-	"	"	Double-reefed topsails and courses.	"	"	"	"	ditto	-	"	"	"	"	"	"			
1.2	1.1	4	2	-	-	"	"	Double-reefed topsail and foresail.	"	N.W.	"	Short	ditto	-	"	"	"	"	"	"			
1.5	1.5	3	8	-	-	"	"	ditto	"	"	"	Moderate	ditto	-	"	"	"	"	"	"			
1.2	1.5	4	2	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.5	1.5	4	0	-	-	"	"	Double-reefed topsail, main trysail, and spanker.	W.S.W.	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.5	1.5	4	0	-	-	"	"	Double-reefed topsails and courses, and fore and aft sails.	"	"	6	ditto	ditto	-	"	"	"	"	"	"			
1.4	1.4	4	5	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.8	1.8	3	8	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.8	1.8	4	0	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.7	1.7	3	2	-	-	"	"	Double-reefed topsails and foresail.	S.W. by W. ½ W.	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.8	1.8	3	0	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.5	1.5	3	2	-	-	"	"	ditto	W.S.W.	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.9	1.9	1	8	-	-	"	"	ditto	N. by E. ½ E.	"	"	ditto	ditto	-	"	"	"	"	"	"			
1.7	1.7	2	8	-	-	"	"	Double-reefed topsails and courses.	"	"	"	ditto	ditto	-	"	"	"	"	"	"			

"BELLEROPHON."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Bellerophon"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
							Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Batten Instrument.				Clinometer.			Pendulum.			Batten Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
																										Degrees.				Degrees.				Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Provisions.	Stores.	Coals.	Forward.	Aft.	H.	M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</

"BELLEROPHON."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Bellerophon"—continued.

Pitching when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.						Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees.																								
1-3	1-2	2	0	-	-	Yes	Screw disconnected, but not revolving.	-	Double reefed topsails, and courses.	-	N. by E.	W.N.W.	4	Slight	-	Weather bow	-	Topgallant yards only.	-	Yes	-	All	All	No rolling motion from 8 a.m. until 3 p.m. on 24th June.
1-3	1-2	2	0	-	-	"	Screw disconnected while under sail, but not revolving.	-	ditto	-	"	"	"	Weather bow	-	ditto	-	Topgallant only.	-	"	-	"	"	
1-2	1-1	2	0	-	-	"	"	-	Double reefed topsails, and foresail.	-	"	"	"	Slight	-	ditto	-	"	-	"	-	"	"	
1-4	1-2	2	0	-	-	"	"	-	ditto	-	N. $\frac{3}{4}$ E.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 6 h. and 7 h. p.m. on 24th June horizon obscured by fog. At 4 h. a.m. on the 25th June horizon obscured by fog.
1-7	1-0	2	0	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-5	1-4	3	0	-	Yes	"	"	-	Topsails and courses	-	N.N.W.	W.	3 to 4	-	ditto	-	ditto	-	"	-	"	-	"	
1-5	1-5	3	0	-	-	Yes	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	No rolling motion from 5 h. a.m. on 25th June until noon of 27th June.
1-4	1-5	2	5	-	-	"	"	-	ditto	-	N. by W. $\frac{3}{4}$ W.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
-	-	2	2	-	-	"	"	-	ditto	-	N. by W. $\frac{1}{2}$ W.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	No rolling motion from noon until 6 h. p.m. of 27th June.
1-3	1-3	1	5	-	-	"	"	-	All plain sail	-	N. by W.	W. by N.	2	-	ditto	-	ditto	-	"	-	"	-	"	
1-0	0-8	2	0	Yes	-	-	"	-	None	-	N. by W. $\frac{1}{2}$ W.	N.E.	1	None	-	None	-	"	-	"	-	"	-	
1-5	1-5	3	0	-	-	Yes	"	-	Single reefed topsails, topgallant sails, and foresail.	-	S. S. E.	Easterly	2 to 3	Slight	-	Weather bow	-	"	-	"	-	"	-	At 11 a.m. instruments compared by simultaneous observations.
1-4	1-4	2	5	-	-	"	"	-	All plain sail except royals, one reef in topsails.	-	S. by E. $\frac{1}{2}$ E.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-0	1-1	3	5	-	-	"	Screw disconnected, but not revolving.	-	All plain sail except royals	-	S.E. by S. $\frac{1}{2}$ S.	E.	5	Moderate	-	ditto	-	"	-	"	-	All except bow ports.	All except bow ports.	
1-3	1-2	3	8	-	-	"	"	-	ditto	-	S.E. by S. $\frac{1}{4}$ S.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-2	1-1	3	8	-	-	"	"	-	All plain sail	-	S.E. by S. $\frac{1}{2}$ S.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-0	0-0	4	0	-	-	"	"	-	ditto	-	S.E. $\frac{1}{2}$ E.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-0	0-0	4	0	-	-	"	"	-	Plain sail to topgallant sails.	-	S.S.E.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-2	1-4	2	5	-	-	"	"	-	ditto	-	N.N.E.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-3	1-0	4	0	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-5	1-0	4	0	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-6	5	0	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-7	5	0	-	-	-	"	"	-	ditto	-	N.E. by N. $\frac{1}{2}$ N.	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-4	5	2	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-5	5	2	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
0-0	5	2	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-2	5	0	-	-	-	"	"	-	Plain sail to first reef in topsails.	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-3	4	2	-	-	-	"	"	-	All plain sail except royals	-	N.E. by N. $\frac{1}{2}$ W.	Easterly	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-4	4	5	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
0-0	4	5	-	-	-	"	"	-	Topsails and courses	-	N.E. by N.	E.S.E.	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-1	4	0	-	-	-	"	"	-	ditto	-	"	Easterly	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-2	4	0	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-1	3	5	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	At 11 o'clock instruments compared by simultaneous observations.
1-2	3	8	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-5	2	0	-	-	-	"	"	-	ditto	-	S. $\frac{3}{4}$ E.	E. b. S.	"	-	ditto	-	ditto	-	"	-	"	-	"	
1-5	2	0	-	-	-	"	"	-	ditto	-	"	"	"	-	ditto	-	ditto	-	"	-	"	-	"	

REPORT, &c. RELATIVE TO

“BELLEROPHON.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Bellerophon”—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.																When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
							Clinometer.					Pendulum.					Batten Instrument.						Clinometer.			Pendulum.			Batten Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
																															Degrees.				Degrees.				Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Days.	Ms.	Tons.	Ft. in.	Ft. in.	H.	M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

"BELLEROPHON."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Bellerophon"--continued.

Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.				Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees		K.	M.	F.																				
14	00	1	0		-	-	Yes	Screw disconnected, but not revolving.	All plain sail - - -	S. $\frac{1}{2}$ E.	E. by S.	5	Slight	- -	Weather bow - -	- -	Yes - -	Yes - -	All except bow ports.	All except bow ports.	All	All	From 10 a.m. until 5 p.m. chasing to windward in company with the squadron.	
15	15	1	0		-	-	"	"	All plain sail except royals	S. by E.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		At noon heel taken by batten, as per signal from senior officer.
13	13	1	0		-	-	"	"	ditto - - -	S. by E. $\frac{1}{4}$ E.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
16	18	3	0		-	-	"	"	ditto - - -	S. by E. $\frac{1}{2}$ E.	East.	4	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At noon heel taken by batten, as per signal from senior officer.	
		1	0		-	-	"	"			"			- -		- -	" - -	" - -	"	"	"	"		
18	18	2	0		-	-	"	"	ditto - - -	N.E. $\frac{1}{2}$ N.	E. by S.	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At noon heel taken by batten, as per signal from senior officer.	
09	18	1	0		-	-	"	"	ditto - - -	N.E. by N.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
19	19	1	0		-	-	"	"	Topsails and courses, topgallant sails, and fore and main royals.	"	S.E.	5 to 4	ditto	- -	ditto - -	- -	" - -	" - -	All	All	"	"	At noon heel taken by batten, as per signal from senior officer.	
					-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
19	18	1	0		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	From 10 a.m. until 5 p.m. chasing to windward in company with the squadron.	
18	17	3	0		-	-	"	"	All plain sail - - -	S. E.	E. by N.	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
					-	-	"	"	ditto - - -	S. $\frac{3}{4}$ E.	E. by S.	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	From 10 a.m. until 5 p.m. chasing to windward in company with the squadron.	
09	09	3	2		-	-	"	"	All plain sail except royals	S. by E.	Easterly	3 to 4	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
13	13	3	2		-	-	"	"	ditto - - -	S. $\frac{1}{2}$ E.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 11 a.m. instruments compared by simultaneous observations.	
11	11	4	0		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
09	09	4	0		-	-	"	"	All plain sail except mainsail.	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	No rolling motion from noon until 7 p.m.	
					-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
09	10	3	0		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	No rolling motion from 4 a.m. until 8 a.m.	
09	19	2	5		-	-	"	"	ditto - - -	S. by E.	E. by S.	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
09	09	2	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 11 o'clock instruments compared by simultaneous observations.	
					-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
08	08	2	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	No rolling motion from 1 p.m. on 1st July until 6 p.m. on 2nd July.	
09	10	3	0	Yes	-	-	Yes	"	None - - -	E. by S.	"	"	ditto	- -	Ahead - -	- -	Topgallant yards only.	"	"	"	"			
09	09	3	0		-	-	Yes	"	All plain sail - - -	N. E.	"	"	ditto	- -	Weather bow - -	- -	Yes - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
06	04	2	5		-	-	"	Disconnected, not revolving.	All plain sail except royals, topsails, and topgallant sails.	N.E. by N.	S. E.	3	None	- -	None - -	- -	" - -	" - -	"	"	"	"		
09	09	2	2		-	-	"	"	ditto - - -	"	"	3	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
05	07	2	5		-	-	"	"	ditto - - -	N.N.E.	E. by S.	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
07	07	2	5		-	-	"	"	ditto - - -	N.N.E. $\frac{1}{2}$ E.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
					-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
08	07	2	5		-	-	"	"	All plain sail except royals, topsails, and topgallant sails, and courses.	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
07	09	2	2		-	-	"	"	Plain sail to topgallant sails except mainsail.	N. E.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
06	07	5	5	Yes	-	-	"	"	None - - -	E. $\frac{1}{2}$ S.	E. by N.	3	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
08	09	5	5		-	-	"	"	ditto - - -	"	"	3	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
07	07	7	0		-	-	Yes	"	Fore and aft sail	E. $\frac{3}{4}$ S.	N. E.	"	Slight	- -	Weather bow	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
09	09	6	2		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
07	19	4	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
07	11	3	8		-	-	"	"	Fore and aft sail and fore-sail.	"	"	2	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
08	08	4	0		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
09	10	3	5		-	-	"	"	ditto - - -	E. $\frac{1}{2}$ S.	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
08	08	4	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
					-	-	"	"	ditto - - -	"	"	3 to 2	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
05	05	5	2		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
06	05	5	5		-	-	"	"	Fore and aft sail	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
08	05	5	8		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
06	05	5	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
05	05	5	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
07	05	5	5		-	-	"	"	ditto - - -	"	"	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"		
06	05	5	8		-	-	"	"	ditto - - -	"	N.E. by E.	"	ditto	- -	ditto - -	- -	" - -	" - -	"	"	"	"	At 10 a.m. instruments compared by simultaneous observations.	
07	06	5	8		-	-	"	"	ditto - - -	"	"													

“ BELLEROPHON.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “ Bellerophon”—continued.

DATE.	On Board.			Draft of Water, as near as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.											
							Clinometer.					Pendulum.					Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.					
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.			
																															Degrees.		
	Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																											
4 July 1868	79	2	193	21	1	26 2	8 0 a. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Not working -	-	2	10	3	1.8	8.4	2.2 St.				
							9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 8	2	3	11	5	1.8	8.8	2.2	
							10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Not working -	-	3	10	4	2.0	8.4	3.2 "
							11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 9	2	3	11	5	1.5	8.0	3.5 "
							12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 10	3	5	11	6	3.0	8.0	4.0 "
							1 0 p. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 10	4	5	11	7	3.4	8.0	4.0 "
							2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4 9	4	4	12	7	4.0	8.4	4.2 "
							3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 10	4	5	8	6	3.9	8.4	4.2 "
							4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 10	3	5	9	7	3.6	8.4	4.2 "
							5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4 10	4	4	10	7	2.7	8.8
5 July 1863	78	2	187	21	1	26 2	6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 10	4	6	11	7	4.0	8.4	5.0 "				
							7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3 10	4	5	10	7	4.1	8.0	4.5 "	
							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPTAIN’S JOURNAL of Her Majesty’s Ship “ BELLEROPHON,”

Date.	Sailing.	Steaming.	Tacking.	Wearing.
4 June	- - - Nil	6.8 knots	- - Nil	- - Nil
5 "	- - - Nil	5.5 "	- - "	- - "
6 "	- - - 1.5 knot, all plain	4.5 "	- - "	- - "
7 "	- - - 4.8 knots, plain sail	- - Nil	- - "	- - "
8 "	- - - 4.5 - ditto	- - "	- - "	- - "
9 "	- - - 2.5 - ditto	- - "	- - "	- - "
10 "	- - - 2.5 - ditto	4.5 knots	- - "	- - "
11 "	- - - 0.5 knot, topsails and jib	3 "	- - "	- - "
12 "	- - - 0.5 - ditto	4.5 "	- - "	- - "
13 "	- - - 1.5 knot, plain sail	- - Nil	- - "	- - "
14 "	- - - 1.0 knot, topsails and jib	4.5 knots	- - "	- - "
15 "	- - - 0.8 knot, plain sail	- - Nil	- - "	- - "
16 "	- - - 1.5 - ditto	- - "	- - "	- - "
17 "	- - - 5.5 knots, plain sail	5 knots	- - "	- - "
18 "	- - - 1.5 knot, plain sail	4.5 "	- - "	- - "
19 "	- - - 1.5 - ditto	- - Nil	- - "	- - "
20 "	- - - 2.8 knots, plain sail	4.5 knots	- - "	- - "
21 "	- - - 1.5 knot, topsails and courses	- - Nil	- - "	- - "
22 "	- - - 3.5 knots, double-reefed topsails and courses	- - "	7½ minutes, 11½ points	- - "
23 "	- - - 4.5 - ditto	4 knots	- - Nil	- - "
24 "	- - - 2.5 knots, topsails and courses	- - Nil	- - "	15 minutes
25 "	- - - 1.5 knot - ditto	5 knots	- - "	- - Nil
26 "	- - - 1.5 - ditto	- - Nil	- - "	- - "
27 "	- - - 2.5 knots - ditto	- - "	- - "	- - "
28 "	- - - 0.5 knot, plain sail	4.2 knots	- - "	- - "
29 "	- - - 3.5 knots, topsails and courses	- - Nil	- - "	16½ minutes
30 "	- - - 2.5 knots, plain sail, except courses	- - "	8½ minutes, 11½ points	- - Nil
1 July	- - - 2.5 knots, plain sail	6 knots	- - Nil	- - "
2 "	- - - Nil	5½ "	- - "	- - "
3 "	- - - Nil	6 "	- - "	- - "
4 "	- - - 4.0 knots, plain sail	5.8 "	- - "	- - "
5 "	- - - 3.5 - ditto	5.8 "	- - "	- - "

“BELLEROPHON.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Bellerophon”—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.				
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction.	Force.	Direction, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.							
8	9	5	8		Yes			Fore and aft sail and fore-sail.	E. ¼ S.	N. E.	2	Slight	-	Weather bow	-	Yes	-	Yes	-	All	All	All	All.	At 11 a.m. instruments compared by simultaneous observations.
10	9	6	0		"			- ditto -	"	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
8	9	5	8		"			- ditto -	"	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
8	8	6	0		"			- ditto -	"	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
9	9	6	0		"			- ditto -	"	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
6	7	4	0		Yes	Not disconnected.		All plain sail, except royals	E. ¾ S.	N. E. by N.	3 to 4	ditto	-	-	-	"	-	"	-	"	"	"	"	
7	7	3	0		"			- ditto -	"	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
		1	5					- ditto -	"	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
8	9	3	0		"			- ditto -	S. E. by S.	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
6	5	2	5		"			Topsails, topgallant sails, and jib.	E. ¾ S.	"	3	ditto	-	-	-	"	-	"	-	"	"	"	"	
4	4	2	0		"			Single-reefed topsails, topgallant sails (fore and main), and foresail.	E. by S.	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
6	6	2	5		"			- ditto -	E. ½ N.	N. E.	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
5	5	3	0		"			- ditto -	E. by S.	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-		-			- ditto -	E. ½ S.	"	"	ditto	-	-	-	"	-	"	-	"	"	"	"	
No rolling motion this day; ship heeling 3° 5' until 4 p. m. From 4 p. m. until 7 p. m., ship heeling 5° 5'.																								

between the 4th June and the 5th July 1868.

F. W. Rea, Staff Commander.
R. J. J. G. Macdonald, Captain.

Rolling.		Pitching.		Power of Fighting Guns.		Distribution of Weights.		Dryness.		General Handiness.		REMARKS.
Nil	-	Nil	-	Good	-	Good	-	Good	-	Good.	-	
-	-	-	-	ditto	-	ditto	-	ditto	-	ditto.	-	
-	-	-	-	ditto	-	ditto	-	ditto	-	ditto.	-	
Roll.	Heel.	Fore.	Aft.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	1.2	2.	1.2	ditto	-	ditto	-	ditto	-	ditto.	-	
"	2.6	2.	1.8	ditto	-	ditto	-	ditto	-	ditto.	-	
"	"	1.	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	4.9	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
4.0	"	1.	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
1.7	"	.5	.5	ditto	-	ditto	-	ditto	-	ditto.	-	
1.9	1.2	.5	.5	ditto	-	ditto	-	ditto	-	ditto.	-	
1.8	0.9	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
"	"	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
"	"	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
1.5	1.9	1.	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	1.4	1.5	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	"	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
"	1.6	1.	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	1.4	2.	2.	ditto	-	ditto	-	ditto	-	ditto.	-	
0.4	"	1.5	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	3.4	1.5	1.5	ditto	-	ditto	-	ditto	-	ditto.	-	
"	2.0	1.	1.5	ditto	-	ditto	-	ditto	-	ditto.	-	
"	1.6	1.3	1.3	ditto	-	ditto	-	ditto	-	ditto.	-	
1.7	2.0	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
"	4.2	1.2	1.2	ditto	-	ditto	-	ditto	-	ditto.	-	
"	3.6	1.9	1.8	ditto	-	ditto	-	ditto	-	ditto.	-	
1.7	2.5	1.	1.	ditto	-	ditto	-	ditto	-	ditto.	-	
"	"	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	
3.2	2.0	.8	.9	ditto	-	ditto	-	ditto	-	ditto.	-	
3.0	"	.8	.9	ditto	-	ditto	-	ditto	-	ditto.	-	
"	1.4	.7	1.1	ditto	-	ditto	-	ditto	-	ditto.	-	
"	3.0	.9	.9	ditto	-	ditto	-	ditto	-	ditto.	-	
"	"	"	"	ditto	-	ditto	-	ditto	-	ditto.	-	

R. J. J. G. Macdonald, Captain.

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "ACHILLES."

[illegible]

"ACHILLES."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "ACHILLES."

Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether		Whether	
---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--	---------	--

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.									
							Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.		
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.				
	Provisions.	Stores.	Coals.	Forward.	Aft.		Degrees.	Degrees.	Degrees.	Oscillations per Minute.	Degrees.	Degrees.	Degrees.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.						
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																								
7 June 1868	50	4	563	25 8	26 10	1 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
1 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
1 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
1 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
1 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</													

REPORT, &c. RELATIVE TO

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—*continued.*

[illegible]

"ACHILLES."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"--continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
Degrees.																					
1'	-6	1	0	Yes	-	-	Connected	Plain sail, as requisite to keep station.	N.W. by W. 1/2 W.	E.N.E.	2	Long	-	Starboard quarter	Upper yards across.	Braced up	All	All	All	All.	
1'	-6	2	8	"	-	-	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	4	5	"	-	Yes	Disconnected	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	4	5	"	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	0	0	"	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	0	0	"	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	2	5	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	2	5	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	"	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
15'	-6	1	0	-	-	Yes	Disconnected	Plain sail, except royals and spanker, as requisite to keep station.	S.W. by W. 1/2 W.	E.N.E.	2	Long	-	Starboard quarter	- Yes -	- Yes -	All	All	All	All.	
15'	-6	1	0	-	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
15'	-6	2	0	-	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
15'	-6	1	0	-	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
15'	-6	1	0	-	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
15'	-6	1	0	-	-	"	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	Steam- ing	Yes	-	-	-	Connected	- None -	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	round	"	-	-	-	"	ditto	"	"	2	ditto	-	ditto	"	"	"	"	"	"	
15'	-6	the	"	-	-	-	"	ditto	East	Westerly	1	ditto	-	Port beam	Upper yards across.	Square	"	"	"	"	
15'	-6	targets	"	-	-	-	"	ditto	N.W. by W.	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	targets	-	-	-	-	Disconnected	Plain sail, except mainsail and royals, as requisite to keep station.	"	"	1	ditto	-	Starboard beam	- Yes -	- Yes -	"	"	"	"	
1'	-6	1	0	-	-	Yes	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	0	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	2	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
2'	-6	2	0	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
2'	-6	2	0	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	2	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	2	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	8	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1	ditto	-	ditto	"	"	"	"	"	"	
1'	-6	1	5	-	-	"	"	ditto	"	"	1										

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.										
							Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Batten Instrument.				Clinometer.			Pendulum.			Batten Instrument.						
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.							
											Degrees.															Degrees.				Degrees.		
Provisions.	Stores.	Coals.	Forward.	Aft.	H. M.	1'	1'2	2'2	4'	7'	1'	1'5	2'5	4'5	7'5	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
12 June 1868	45	4	529	25 10	26 9	1 0 a.m.	1'	1'2	2'2	4'	7'	1'	1'5	2'5	4'5	7'5	-	-	-	-	-	-	-	-	-	-	-	-	-			
						2 0 "	1'	1'4	2'4	4'	7'	1'2	1'6	2'8	4'5	7'5	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						3 0 "	1'2	1'5	2'7	4'	7'	1'4	1'9	3'3	4'5	8'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	1'2	1'6	2'8	4'5	7'	1'5	2'	3'5	4'8	7'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	1'5	1'7	3'2	4'5	7'5	1'6	2'	3'6	4'8	7'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 "	1'5	1'8	3'3	4'5	8'	1'8	2'	3'8	4'5	7'	5	9	1'3	2'5	7'	-	-	-	-	-	-	-	-	-	-	
						7 0 "	1'5	2'	3'5	4'5	7'5	2'	2'	4'	4'5	7'	1'5	1'	2'	2'5	7'5	-	-	-	-	-	-	-	-	-	-	
						8 0 "	1'5	2'	3'5	4'5	7'	2'	2'	4'	5'	7'	1'5	1'	2'5	2'5	7'	-	-	-	-	-	-	-	-	-	-	
						9 0 "	1'5	2'	3'5	4'5	7'	2'	2'	4'	4'5	7'	1'5	1'	2'5	2'5	7'5	-	-	-	-	-	-	-	-	-	-	
						10 0 "	9	1'	1'9	4'	7'	1'	1'5	2'5	4'5	7'	8	1'1	1'9	3'5	7'4	-	-	-	-	-	-	-	-	-	-	
						11 0 "	5	5'	1'	3'	7'	5	8	1'3	2'5	7'	8	1'	1'8	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						Noon	5	7'	1'4	3'	7'	5	1'	1'5	2'5	7'	6	8	1'4	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						1 0 p.m.	-	-	-	-	-	1'	1'	2'	2'5	7'	8	8	1'6	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						2 0 "	-	-	-	-	-	1'	1'	2'	2'5	7'	1'	6	1'6	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						3 0 "	-	-	-	-	-	1'	1'	2'	2'5	7'	8	6	1'4	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						4 0 "	-	-	-	-	-	1'	1'	2'	1'	7'	9	4	1'3	1'5	7'	-	-	-	-	-	-	-	-	-	-	-
						5 0 "	-	-	-	-	-	5	5	1'	2'	7'	8	5	1'3	2'5	7'5	-	-	-	-	-	-	-	-	-	-	-
						6 0 "	-	-	-	-	-	5	3	8	2'	7'	7	5	1'2	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						7 0 "	-	-	-	-	-	5	4	9	2'	7'	5	5	1'2	2'5	7'	-	-	-	-	-	-	-	-	-	-	-
						8 0 "	-	-	-	-	-	5	4	9	2'	7'	5	5	1'	2'	7'	-	-	-	-	-	-	-	-	-	-	-
						9 0 "	-	-	-	-	-	5	4	9	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						10 0 "	-	-	-	-	-	5	4	9	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						11 0 "	-	-	-	-	-	4	4	8	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						Midnight	-	-	-	-	-	5	3	8	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 June 1868	44	4	528	25 10	26 9	1 0 a.m.	-	-	-	-	-	5	5	1'	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-				
						2 0 "	-	-	-	-	-	3	4	7	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-			
						3 0 "	-	-	-	-	-	3	4	7	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-			
						4 0 "	-	-	-	-	-	4	5	9	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-			
						5 0 "	-	-	-	-	-	5	5	1'	2'	7'	-	-	-	-	-	-	-	-	-	-	-	-	-			
						6 0 "	-	-	-	-	-	5	5	1'	2'	7'	5	7	1'2	2'	7'	-	-	-	-	-	-	-	-	-		
						7 0 "	-	-	-	-	-	5	5	1'	2'	7'	5	7	1'2	2'	7'	-	-	-	-	-	-	-	-	-		
						8 0 "	-	-	-	-	-	5	5	1'	2'	7'	5	7	1'2	2'	7'	-	-	-	-	-	-	-	-	-		
						9 0 "	1'	1'	2'	2'5	7'	2'	2'4	4'4	6'	7'	1'9	1'2	3'1	4'5	7'5	-	-	-	-	-	-	-	-	-		
						10 0 "	1'	1'	2'	2'5	7'	5	8	1'3	3'5	7'	1'5	1'	2'5	4'	7'5	-	-	-	-	-	-	-	-	-		
						11 0 "	1'	1'	2'	2'5	7'5	1'	8	1'8	2'5	7'	1'5	1'	2'5	4'	7'5	-	-	-	-	-	-	-	-	-		
						Noon	1'	1'	2'	2'5	7'	1'	5	1'5	2'5	7'	1'5	1'	2'5	4'	7'	-	-	-	-	-	-	-	-	-		
						1 0 p.m.	1'	1'	2'	2'5	7'	1'5	5	2'	2'5	7'	1'7	6	2'3	4'5	7'	-	-	-	-	-	-	-	-	-		
						2 0 "	1'	1'	2'	2'5	7'	1'5	5	2'	3'	7'	1'7	6	2'3	3'5	7'	-	-	-	-	-	-	-	-	-		
						3 0 "	1'	1'	2'	2'5	7'	1'5	1'	2'5	3'5	7'	1'5	5	2'	3'5	7'	-	-	-	-	-	-	-	-	-		
						4 0 "	1'	1'	2'	2'5	7'	1'5	1'	2'5	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						5 0 "	1'	1'	2'	2'5	7'	1'5	1'	2'5	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						6 0 "	1'	1'	2'	2'5	7'	1'5	1'	2'5	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						7 0 "	1'	1'	2'	2'5	7'	1'5	1'	2'5	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						8 0 "	1'	1'	2'	2'5	7'	1'5	1'	2'5	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						9 0 "	1'	1'	2'	2'5	7'	1'5	1'2	2'7	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						10 0 "	1'	1'	2'	2'5	7'5	1'2	1'4	2'6	3'5	7'	1'5	5	2'	3'	7'	-	-	-	-	-	-	-	-	-		
						11 0 "	1'	1'	2'	2'5	7'	1'	1'2	2'2	3'	7'5	1'	1'	2'	3'	7'5	-	-	-	-	-	-	-	-	-	-	
						Midnight	1'	1'	2'	2'5	7'5	1'	1'	2'	3'	7'	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-	-	-	
14 June 1868	43	4	519	25 10	26 9	1 0 a.m.	8	1'	1'8	2'	7'	1'	1'	2'	2'5	7'	-	-	-	-	-	-	-	-	-	-	-	-				
						2 0 "	8	1'	1'8	2'5	7'5	1'	1'	2'	2'5	7'5	-	-	-	-	-	-	-	-	-	-	-	-				
						3 0 "	6	8	1'4	2'5	7'	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-	-	-	-	-				
						4 0 "	5	7	1'2	2'5	7'5	1'	1'	2'	3'	7'5	-	-	-	-	-	-	-	-	-	-	-	-				
						5 0 "	5	7	1'2	2'5	7'	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-	-	-	-	-				
						6 0 "	8	1'	1'8	2'5	7'5	1'	1'	2'	3'	7'	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-			
						7 0 "	8	1'	1'8	2'5	7'	1'	1'	2'	3'	7'	1'	1'	2'	3'	7'5	-	-	-	-	-	-	-	-			
						8 0 "	1'	1'5	2'5	3'	7'	1'	1'	2'	3'	7'	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-			
						9 0 "	1'	1'5	2'5	3'	7'	1'	1'	2'	3'	7'5	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-			
						10 0 "	1'	1'5	2'5	3'5	7'	1'	1'	2'	3'5	7'	1'	1'	2'	3'	7'	-	-	-	-	-	-	-	-			
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—*continued.*

500.

“ACHILLES.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Achilles”—*continued.*

[illegible]

"ACHILLES."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"--continued.

H.M.S. Ship "Achilles" — continued.																							
Pitching when ascertained.		Speed.			Whether		Whether with		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.				
Forward.	Aft.	K.	I.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.			Lee.		
1	5	1	0	-	-	Yes	Connected	Topsails, topgallant sails, and courses.	North	Calm	0	Slight	-	Port bow	-	Yes	-	Yes	-	All	All	All	All.
1	5	1	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	0	8	-	-	"	"	Topsails, topgallant sails, and foresail.	"	Westerly	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	N. N. W.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	N. 1/2 W.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	2	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	W. by N.	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	Yes	Connected	Topsails, topgallant sails, and foresail.	N. 1/2 W.	W. by N.	2	Slight	-	Port bow	-	Yes	-	Yes	-	All	All	All	All.
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	N. by W.	West	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	North	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	N. 1/2 E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	N. by E.	Calm	0	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"
1	5	1	5																				

"ACHILLES."—RETURN of Rolling and Performance at SEA of Her Majesty's Ship "ACHILLES."

Pitching, when ascertained.		Speed.			Whether			Whether with			SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.					
Degrees.																									
Not taken		2	0			Yes	Connected		Topsails, top gallant sails, and foresail.	W. by N.	E.	3	Slight		Astern, starboard beam, starboard quarter.	Down	Down	All	All	All	All.				
		2	2			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	0			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		3	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		3	8			"	"		ditto	N.W. by W.	"	"	ditto		ditto	"	"	"	"	"	"				
		2	0			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		2	5			"	"		Topsails	W.S.W.	Easterly	4	ditto		ditto	"	"	"	"	"	"				
		4	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		3	5		Yes	"	"		Plain sail	Northerly	"	5	ditto		ditto	"	"	"	"	"	"				
		6	5		"	"	"			"	"	"	ditto		ditto	"	"	"	"	"	"				
		4	0		"	"	"		None	N.W.	"	"	ditto		ditto	"	"	"	"	"	"				
		4	0		"	"	"			"	E.N.E.	"	ditto		ditto	Across	Square	"	"	"	"				
		4	8			Yes	"		Plain sail	"	"	"	ditto		ditto	"	"	"	"	"	"				
		4	8			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		5	0			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		5	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		5	0			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		5	0			"	Connected		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		4	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		4	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		3	8			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
Not taken		3	0			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		2	5			"	"		Topsails and headsails	"	"	"	ditto		ditto	"	"	"	"	"	"				
						"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		2	2			Yes	Connected		Topsails and headsails				Nil		Starboard beam	Yes	Square	All	All	All	All.				
		2	5			"	"		ditto				ditto		ditto	"	"	"	"	"	"				
		2	0			"	"		Topsails and foresail				ditto		ditto	"	"	"	"	"	"				
		2	0			"	"		ditto				ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto				ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto				ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	N.W.	E.N.E.	1	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	Slight		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"	"	"	"				
		1	5			"	"		ditto	"	"	"	ditto		ditto	"	"	"</							

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.									
							Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.		
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.				
											Degrees.															Degrees.			
Provisions.	Stores.	Coals.	Forward.	Aft.																									
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H.	M.																							
19 June 1868	38	4	498	25	8	26	9	1	0	p.	m.	-	-	-	-	-	-	-	-	-	-	-	-						
								2	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								3	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								4	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								5	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								6	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								7	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								8	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								9	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								10	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								11	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 June 1868	37	4	489	25	8	26	9	1	0	a.	m.	-	-	-	-	-	-	-	-	-	-	-	-						
								2	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								3	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								4	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								5	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								6	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								7	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								8	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								9	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								10	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								11	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								1	0	p.	m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								2	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								3	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								4	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								5	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								6	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								7	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								8	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								9	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								10	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								11	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 June 1868	36	4	488	25	8	26	9	1	0	a.	m.	-	-	-	-	-	-	-	-	-	-	-	-						
								2	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								3	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								4	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								5	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								6	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								7	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								8	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								9	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								10	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								11	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								Noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
								1	0	p.	m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								2	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								3	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								4	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								5	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								6	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								7	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								8	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								9	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								10	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								11	0	"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
								Midnight	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

"ACHILLES."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"--continued.

Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.							Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
5	3	0	0		Yes	-	-	Connected	-	-	None	-	N.E.	W.N.W.	2	Slight	-	Port beam	-	Yes	-	Square	All	All	All	Steam evolutions.
5	3	3	0		"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	All	All	All	
5	3	3	0		"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	3	0		"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	0		"	-	Yes	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	3	0		"	-	"	"	-	-	Reefed topsails and fore-sail.	-	S.W. 1/4 W.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	5		"	-	"	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	0		"	-	"	"	-	-	ditto	-	"	"	"	ditto	-	Starboard bow	-	"	-	"	"	"	"	
Not taken	-	2	5		"	-	"	"	-	-	ditto	-	N. by E.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	0		"	-	"	"	-	-	Topsails, jib, and foretop-mast staysail.	-	"	"	"	ditto	-	ditto	-	"	-	Braced up	"	"	"	
-	-	2	5		"	-	"	"	-	-	ditto	-	N. by W.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	5		"	-	"	"	-	-	ditto	-	"	"	3	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	8		Yes	Connected	-	Single-reefed topsails and courses.	-	-	-	-	N. by W.	W.N.W.	5	Slight	-	Starboard bow	-	Yes	-	Braced up	All	All	All	All.
-	-	3	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
Not taken	-	2	5		"	-	"	ditto	-	-	ditto	-	S.S.W.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	3	0		"	-	"	ditto	-	-	ditto	-	S.W.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	3	0		"	-	"	ditto	-	-	ditto	-	W. by S.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	8		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	5		"	-	"	ditto	-	-	ditto	-	W.S.W.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	1	0		"	-	"	Single-reefed topsails	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	1	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	3	8		"	-	"	All plain sail	-	-	ditto	-	W. 1/2 N.	N.W. 1/2 N.	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	1	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	5		"	-	"	Topsails and foresail	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	Port beam	-	"	-	"	"	"	"	
5	3	1	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	1	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	2	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	3	0		"	-	"	ditto	-	-	ditto	-	N.	W.N.W.	4	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	3	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
Not taken	-	3	8		"	-	"	Single-reefed topsails and haed sails.	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	4	2		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	4	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	8		Yes	Connected	-	Single-reefed topsails and head sails.	-	-	-	-	N.	W.N.W.	7 to 8	Short	-	Port beam	-	Royal yards down.	-	Braced up	All	All	All	All.
Not taken	-	2	8		"	-	"	Double-reefed topsails and head sails.	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	2	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	3	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1-5	6	1	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1	6	1	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	1	5		"	-	"	Topsails and head sails	-	-	ditto	-	N.N.E.	N.W. by W.	"	ditto	-	ditto	-	"	-	Across	"	"	"	
5	3	1	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
5	3	1	8		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1	6	1	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1-5	6	2	0		"	-	"	Topsails and foresails	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1-5	6	2	0		"	-	"	ditto	-	-	ditto	-	N.E. by N.	N.W.	3	ditto	-	ditto	-	"	-	"	"	"	"	
1-5	6	1	8		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1-5	6	1	8		"	-	"	ditto	-	-	ditto	-	N.N.E. 1/2 E.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1-5	6	0	8		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	8		"	-	"	Double-reefed topsails, foresail, and jib.	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1	6	1	2		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
1	6	1	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	8		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	Port quarter	-	"	-	"	"	"	"	
Not taken	-	0	5		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	
-	-	0	0		"	-	"	ditto	-	-	ditto	-	"	"	"	ditto	-	dit								

REPORT, &c. RELATIVE TO

“ACHILLES.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Achilles”—*continued.*

[illegible]

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees.																							
-	-	0	5	-	-	Yes	Connected		Double-reefed topsails, foresail, and jib.	N.N.E.	N.W.	1	Short	-	Port beam	-	Yes	-	Yes	All	All	All	All.
-	-	0	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	0	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	1	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	1	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	0	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-6	0	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-3	2	5	-	-	"	"	-	Topsails and headsails	N.E. by N.	"	2	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-3	0	0	Yes	-	"	"	-	None	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	-	-	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	Square	"	"	"	"
2-	-6	4	0	-	-	-	-	-	ditto	N.E.	"	"	ditto	-	Starboard beam	-	"	-	"	"	"	"	"
1-5	-6	4	0	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	0	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-6	2	0	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-6	2	0	-	-	Yes	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	-	-	-	-	-	-	-	Topsails and topgallant sails, foresail, and headsails.	"	"	"	ditto	-	ditto	-	"	-	Yes	"	"	"	"
1-	-6	2	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-6	1	5	-	-	"	"	-	Double-reefed topsails	S.W. ½ S.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	2	5	-	-	"	"	-	ditto	S.W. by S.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	5	-	-	"	"	-	ditto	S.S.W. ½ W.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	8	-	-	"	"	-	ditto	S.W. by S.	N.N.W.	3	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	0	-	-	Yes	Connected		Double-reefed topsails and fore and aft sails.	S.W. by S.	N.N.W.	3	Short	-	Starboard beam	-	Yes	-	Yes	All	All	All	All.
-	-	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	3	8	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
2-	-6	3	8	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
2-	-6	4	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	2	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	4	2	-	-	"	"	-	ditto	W. by S. ½ S.	N.W.	7	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	5	-	-	"	"	-	ditto	W. by S.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
2-	-6	3	2	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
2-	-6	2	8	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
2-	-6	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	3	0	-	-	"	"	-	ditto	N. ¾ E.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-5	-6	2	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-6	2	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
1-	-6	3	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	2	5	-	-	"	"	-	ditto	N. ¼ E.	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	2	5	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	2	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	2	8	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	-	-	-	-	"	"	-	ditto	N.	W.N.W.	4	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	-	-	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"
-	-	-	-	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	"	"	"	"

100 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000 8500 9000 9500 10000

[illegible]

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.			Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature ; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.		If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
Degrees.																										
3	-	-	-	-	-	-	Yes	Connected	-	None	-	N. by W.	W.N.W.	3	None	-	None	-	-	Across	-	Square	-	All	All	All.
5	-	-	-	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	4	0	-	-	"	"	-	Topsails, headsails,	-	N.N.W.	West	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	8	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	Yes	-	Yes	-	"	"	"
15	-	-	1	8	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
Not taken	-	-	2	2	-	-	"	"	-	ditto	-	"	"	2	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	5	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	5	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	0	-	-	Yes	Connected	-	Topsails, headsails,	-	N.N.W.	W.S.W.	2	None	-	None	-	-	Yes	-	Yes	-	All	All	All.
15	-	-	1	5	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	2	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	5	-	-	"	"	-	Topsails and courses	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	2	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
Not taken	-	-	1	0	-	-	"	"	-	ditto	-	N. by W. 1/2 W.	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
on	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
account	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
of log.	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	Plain sail, except royals	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	N.W.	West	1	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	Topsails and fore and aft sails.	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	N. 1/2 W.	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-	"	"	"
15	-	-	1	0	-	-	"	"	-	ditto	-	"	"	"	ditto	-	ditto	-	-	"	-	"	-			

REPORT, &c. RELATIVE TO

“ACHILLES.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Achilles”—*continued.*

[illegible]

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.		
-	-	-	-	-	-	-	Yes	Connected	-	Topsails	-	Head from N. by E. to E.	Calm	0	Nil	-	Yes	Braced up	All	All	All	All	
-	-	-	-	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	0	5	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	-	-	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	-	-	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	-	-	-	-	-	"	"	-	All plain sail, except royals	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	-	-	-	-	-	"	"	-	ditto	-	"	Variable	1	ditto	-	"	"	"	"	"	"	
-	-	0	5	-	-	-	"	"	-	ditto	-	N.N.E.	"	"	ditto	-	"	"	"	"	"	"	
-	-	1	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	1	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	1	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	1	0	-	-	-	"	"	-	None	-	Head N.W.	N.E.	1	ditto	-	"	"	"	"	"	"	
-	-	2	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	8	-	-	-	"	"	-	ditto	-	N. by E.	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	8	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	Across	Square	"	"	"	"	
-	-	2	5	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	3	5	-	-	-	Yes	"	-	Plain sail, except royals	-	S. by E.	N.E.	3	ditto	-	"	"	"	"	"	"	
-	-	3	5	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	2	5	-	-	-	"	"	-	Plain sail	-	"	"	"	ditto	-	Yes	Braced up	"	"	"	"	
-	-	2	5	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	2	8	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	2	8	-	-	-	"	"	-	Single-reefed topsails, top-gallant sails, foresail, and head sails.	-	"	"	"	ditto	-	"	"	"	"	"	"	
Not taken	-	3	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	3	8	-	-	-	"	"	-	ditto	-	S.E. by S.	E.N.E.	4	ditto	-	"	"	"	"	"	"	
-	-	3	2	-	-	-	Yes	Connected	-	Single-reefed topsails, top-gallant sails, foresail, and head sails.	-	S.S.E.	E.N.E.	4	Short	Starboard bow	Yes	Braced up	All	All	All	All	
Not taken	-	2	5	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	3	5	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	3	8	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	3	8	-	-	-	"	"	-	Single-reefed topsails, courses, and top-gallant sails.	-	S. by E. ½ E.	"	"	ditto	-	"	"	"	"	"	"	
-	-	3	8	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-	4	0	-	-	-	"	"	-	ditto	-	"	"	"	ditto	-	"	"	"	"	"	"	
-	-																						

REPORT, &c. RELATIVE TO

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—*continued.*

[illegible]

"ACHILLES."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"—*continued.*

Pitching when ascertained.	Speed.	Whether	Whether with	Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.	State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
							Direction.	Force.		If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.											
6	4	2	-	-	Yes	Disconnected	Plain sail	S. 1/2 W.	East	4	Short	-	Starboard beam	-	Yes	Braced up	All	All	All	All.	Chasing to windward.
6	4	2	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	4	2	-	-	"	-	ditto	N.E. by N	E.S.E.	5	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	0	0	-	-	"	Connected	Plain sail, except royals and spanker.	S. by E. 1/2 E.	S.E.	3	ditto	-	ditto	-	"	"	"	"	"	"	
6	1	0	-	-	"	-	ditto	"	"	3	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	8	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	2	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	S. 1/2 W.	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	Yes	Connected	Plain sail, except royals and spanker.	S. 1/2 W.	E. by S.	3	Short	-	Port beam	-	Yes	Braced up	All	All	All	All.	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	5	-	-	"	-	Topsails, topgallant sails, foresail, and head sails.	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	8	-	-	"	-	ditto	S. 1/2 W	E.S.E.	4	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	8	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	3	8	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	Topsails, topgallant sails, foresail, and head sails, with fore trysail.	"	"	4	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	5	8	-	-	"	-	None	E. 1/2 N.	E.S.E.	4	Short	-	Ahead	-	"	"	"	"	"	"	
6	5	8	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	6	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	6	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	6	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	1	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	2	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	0	-	-	Yes	-	Top-sails and courses	N. by E.	"	3	Short	-	Starboard bow	-	"	"	"	"	"	"	
6	2	0	-	-	"	-	Top-sails and courses, with topgallant sails and fore and main trysails.	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	N.N.E. 1/2 E.	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	Yes	Connected	Top-sails and courses, with topgallant sails and fore and main trysails.	N.N.E. 1/2 E.	E.S.E.	"	ditto	-	Starboard bow	-	Yes	Braced up	All	All	All	All.	
6	2	5	-	-	"	-	Plain sail, except mizen royal and fore trysail.	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	0	-	-	"	-	ditto	N.E. 1/2 E.	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	8	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	1	8	-	-	"	-	Topsails, topgallant sails, foresail, and head sails.	"	East	3	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	2	2	-	-	"	-	ditto	N. by E.	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
6	1	8	-	-	"	-	ditto	"	"	"	Nil	-	-	-	"	"	"	"	"	"	
6	3	0	-	-	Yes	-	None	N.E. 3/4 E.	E.N.E.	3	ditto	-	-	-	"	"	"	"	"	"	
6	3	8	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	4	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	4	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	0	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	5	-	-	"	-	ditto	E. 1/4 N.	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	8	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	8	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	0	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	0	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	
6	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	-	"	"	"	"	"	"	

REPORT, &c. RELATIVE TO

“ACHILLES.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Achilles”—*continued.*

[illegible]

"ACHILLES."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"--continued.

Pitching, when ascertained.		Speed.			Whether			Whether with			SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.		If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
-	-	5	5	5	Yes	-	-	Connected	-	-	None	-	E. by N.	E. by N.	2	Short	-	Ahead	-	Royal yards down.	Yes	All	All	All	All.
Not taken	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	"	
-	5	5	5	5	"	-	-	"	-	-	dit														

"ACHILLES."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Achilles"--continued.

Direction.		Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.										
					If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.											
Wind.		Course.	Sea or Swell.																		
Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.																			
Whether		Under Steam only.	Under Steam and Sail.	Under Sail only.																	
Speed.		K.	T.																		
3	4	0	-	Yes	-	Connected	Topgallant sails, foresail, and fore and aft sails.	E. by N.	N.E.	2	None	-	None	-	Royal yards down.	Braced up	All	All	All	All	Cast off "Prince Consort."
3	1	5	-	-	Yes	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	2	-	-	"	-	Topsails and head sails	E. $\frac{3}{4}$ N.	N. by E.	3	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	0	-	-	"	-	Single-reefed topsails, foresail, and head sails.	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	0	-	-	"	-	ditto	E. by N. $\frac{1}{2}$ N.	N.N.E.	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"	"	
3	3	5	-	-	"	-	ditto	N.E.	N. by W.	4	ditto	-	ditto	-	"	"	"	"	"	"	
2	5	-	-	Yes	Connected	Single-reefed topsails, foresail, and head sails.	N.E.	N. by W.	4	None	-	None	-	Royal yards down.	Braced up	All	All	All	All		
2	5	-	-	"	-	ditto	"	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	3	0	-	-	"	-	Topsails and foresails	N.E. by E.	"	3	ditto	-	ditto	-	"	"	"	"	"		
2	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	3	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	2	5	-	-	"	-	Topsails, foresail, and head sails.	N.E. $\frac{1}{2}$ E.	"	3 to 4	ditto	-	ditto	-	"	"	"	"	"		
2	2	0	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	2	5	-	-	"	-	ditto	E.N.E.	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	3	0	-	-	"	-	ditto	N.E. by E.	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	3	2	-	-	"	-	ditto	N.E.	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	3	5	-	-	"	-	ditto	N.E. $\frac{1}{4}$ E.	"	"	ditto	-	ditto	-	"	"	"	"	"		
3	0	-	-	"	-	-	Topsails, topgallant sails, foresail, and trysails.	N.E.	"	"	ditto	-	ditto	-	"	"	"	"	"		
3	0	-	-	"	-	-	ditto	N.E. $\frac{3}{4}$ N.	N.N.W.	4	ditto	-	ditto	-	"	"	"	"	"		
3	3	5	-	-	"	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
3	3	5	-	-	"	-	ditto	N.E. by N.	"	"	ditto	-	ditto	-	"	"	"	"	"		
3	3	0	-	-	"	-	Topsails and courses	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
4	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
4	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
3	8	-	-	"	-	-	Topsails and courses, fore trysail, and head sails.	"	N.W. by N.	2 to 3	ditto	-	ditto	-	"	"	"	"	"		
3	2	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
3	0	-	-	"	-	-	ditto	"	N.W.	2	ditto	-	ditto	-	"	"	"	"	"		
2	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	0	-	-	Yes	-	-	Topsails and courses, fore trysail, and head sails.	N.E. by N.	N.W.	2	None	-	None	-	Royal yards down.	Yes	All	All	All	All	
2	0	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
2	5	-	-	"	-	-	ditto	N.E. $\frac{1}{2}$ E.	"	"	ditto	-	ditto	-	"	"	"	"	"		
6	0	-	-	"	-	-	None	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
6	0	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	"	"	"	"	"		
5	5	-	-	"	-</																

"ACHILLES."—CAPTAIN'S JOURNAL of Her Majesty's Ship

Date.	Sailing.	Steaming.	Tacking.	Wearing.	Rolling.
Friday - 5th June	Fore and aft sail part of the 24 hours	Four boilers, slow; from 0.30 p.m. to 6.30 p.m.; recording revolutions by signal.	None - - - - -	None - - - - -	Trifling -
Saturday - 6th June	Fore and aft and plain sail - - -	Four boilers and fires banked; condensing water.	ditto - - - - -	ditto - - - - -	None - - -
Sunday - 7th June	Plain sail - - - - -	Fires banked under two boilers; condensing; partly screw disconnected.	ditto - - - - -	ditto - - - - -	Trifling -
Monday - 8th June	Plain sail and studding sails - - -	No - - - - -	Twice; 1st. Under single-reefed topsails and topgallant sails; round in 7½ minutes, screw revolving. 2nd. All plain sail to royals, in 7½ minutes, screw fixed.	Very sluggish in paying off; way, 1½ knots; screw not revolving.	Moderately,—Vide Returns. Moderate, broken swell from N.N.E.
Tuesday - 9th June	Plain sail and furled - - - - -	Four boilers; exercising steam evolutions during afternoon, and fires banked.	None - - - - -	None - - - - -	Trifling - - -
Wednesday, 10th June	- - ditto - - - - -	Steaming slow; exercising firing at targets, and fires banked.	ditto - - - - -	ditto - - - - -	Heaviest, 5°; broadside to a moderate northerly swell.
Thursday - 11th June	Plain sail (nearly calm) and furled	Four boilers; performing fleet evolutions, and fires banked.	ditto - - - - -	ditto - - - - -	Trifling - - -
Friday - 12th June	Plain sail, nearly calm - - - - -	Fires banked - - - - -	ditto - - - - -	ditto - - - - -	ditto - - -
Saturday - 13th June	Plain sail, furled, and plain sail - -	Slow, steam evolutions, and fires banked	ditto - - - - -	ditto - - - - -	ditto - - -
Sunday - 14th June	Plain sail, light airs, and calm - -	Fires banked - - - - -	ditto - - - - -	ditto - - - - -	ditto - - -
Monday - 15th June	Plain sail - - - - -	- ditto - - - - -	ditto - - - - -	ditto - - - - -	Trifling; some swell from northward.
Tuesday - 16th June	Plain sail and sails furled - - - -	Four boilers; performing steam evolutions, and fires banked.	Once, 0.30 a.m.; all plain sail; light air; round well.	ditto - - - - -	Trifling - - -
Wednesday, 17th June	- - ditto - - - - -	Three boilers; in forenoon per signal to slow speed.	None - - - - -	ditto - - - - -	ditto - - -
Thursday - 18th June	Plain sail - - - - -	Fires banked - - - - -	ditto - - - - -	ditto - - - - -	None - - -
Friday - 19th June	Plain sail and furled - - - - -	With four boilers and fires banked	ditto - - - - -	ditto - - - - -	Trifling - - -
Saturday - 20th June	All plain sail and reduced to double reefs	Fires banked - - - - -	Once, well - - - - -	ditto - - - - -	ditto - - -
Sunday - 21st June	Plain sail, keeping station - - - -	- ditto - - - - -	None - - - - -	ditto - - - - -	ditto - - -
Monday - 22nd June	Plain sail, keeping station, and sails furled	Four boilers; performing evolutions, and fires banked.	ditto - - - - -	ditto - - - - -	ditto - - -
Tuesday - 23rd June	Plain sail, double-reefed topsails, &c. &c.	Fires banked - - - - -	ditto - - - - -	Once in 7 minutes	Trifling; heeling according, with sail set to keep station.
Wednesday, 24th June	Plain sail and furled - - - - -	Slow speed, and in three boilers; lighted a fourth too late for evolutions, and banked.	ditto - - - - -	None - - - - -	Trifling - - -
Thursday - 25th June	Plain sail, keeping station in fog - -	Fires banked - - - - -	ditto - - - - -	ditto - - - - -	ditto - - -
Friday - 26th June	Plain sail, trying to keep station - -	- ditto - - - - -	ditto - - - - -	ditto - - - - -	ditto - - -
Saturday - 27th June	Plain sail and sails furled - - - -	Fires banked, and with four boilers	Once, well; all plain sail, going one knot.	None - - - - -	ditto - - -
Sunday - 28th June	Plain sail, keeping station - - - -	Fires banked - - - - -	None - - - - -	Once, well - - -	ditto - - -
Monday - 29th June	Plain sail, trying on a wind; studding-sails both sides; running back to station.	- ditto - - - - -	Three times, well; "Bellerophon" missed stays twice.	None - - - - -	Trifling; heeling according, with sail set.
Tuesday - 30th June	Plain sail, keeping station, and sails furled	In five boilers, and fires banked - - -	None - - - - -	ditto - - - - -	Trifling - - -
Wednesday, 1st July	Plain sail and furled - - - - -	Fires banked, and with three and four boilers	ditto - - - - -	ditto - - - - -	ditto - - -
Thursday - 2nd July	Furled - - - - -	Four boilers expansively - - - - -	ditto - - - - -	ditto - - - - -	ditto - - -
Friday - 3rd July	Sails furled, fore and aft occasionally set	Four and six boilers - - - - -	ditto - - - - -	ditto - - - - -	Trifling; heeling according to sail.
Saturday - 4th July	Square sails furled and plain sail - -	In six boilers, and fires banked - - -	ditto - - - - -	ditto - - - - -	None; heeling according to sail, trifling.
Sunday - 5th July	Plain sail - - - - -	Fires banked - - - - -	ditto - - - - -	ditto - - - - -	None - - -

"ACHILLES," between the 5th June and the 5th July 1868.

Pitching.	Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.	REMARKS.
None worth recording.	Perfect - - -	Good - - -	Perfect - - -	Good - - -	Light airs; thick fog part of night.
None - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Thick fog, early morning; light airs; steam manœuvring in forenoon; exercised reefing topsails in evening. Draft of water, forward, 25 ft. 8 in., aft, 26 ft. 10 in.
Trifling - - -	ditto - - -	ditto - - -	ditto - - -	Handy - - -	In afternoon, fresh breeze quarterly. "Warrior," appeared not to have raised screw; "Defence" raised hers, and then apparently could have run past all of us; "Bellerophon" sailing worst in squadron.
Trifling; moderate, broken swell from N.N.E.	ditto - - -	Completed water (condensing). A little too much forward.	ditto - - -	Unruly in paying off, when, by breeze slackening, screw although disconnected did not revolve.	In forenoon, hauled to wind and exercised tacking; "Minotaur" missed stays once; "Warrior" and "Defence" (having screws raised) sailing best; "Defence" tacking best; "Warrior" also good; "Royal Oak" apparently rolling most; "Achilles" running badly, 3 knots, screw fast. Exercised shifting topsails in evening.
None - - -	ditto - - -	Good - - -	ditto - - -	Came up in forenoon, going $1\frac{1}{2}$ knots against her helm; went off sluggishly after sail was made.	Squadron in company. "Warrior" and "Defence," with screws raised, sparing other ships almost everything. At night, exercised general quarters; commenced firing by mistake, continued when flagship opened.
Trifling - - -	ditto - - -	Perfect - - -	ditto - - -	Good - - -	Light airs; from 1 to 3 knots' way.
ditto - - -	ditto - - -	Good - - -	ditto - - -	Handy - - -	Steam evolutions, and in evening exercising shifting topsails and courses; badly.
None - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Drifting to westward. Exercised shifting topsails and courses.
Trifling - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Light airs; small swell; forenoon, fleet evolutions under steam; evening and night, fires banked; men bathed; calm, and light airs; "Defence" parted company.
None - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Drifting about and standing to northward. Afternoon, "Helicon" joined.
Trifling; some swell from northward.	ditto - - -	ditto - - -	ditto - - -	Handy (for way, $\frac{1}{2}$ knot less).	Light airs and calm. Afternoon, "Helicon" left with mails; evening, exercised shifting topsails and courses.
Trifling - - -	ditto - - -	ditto - - -	ditto - - -	Handy - - -	Drifting about in light airs and calms. Afternoon, steam evolutions; later, light easterly winds; running.
None - - -	ditto - - -	ditto - - -	ditto - - -	Handy, so long as any way through water.	Forenoon, prepared for action; topgallant masts on deck; booms down, lower yards slung, bowsprit in, &c. &c.; nice breeze from north-east; exercised reefing topsails.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	Handy - - -	Light airs and calms; "Defence" rejoined; reached rendezvous for first time; exercised shifting topsails and courses; negative bathing; close, warm evening.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Light airs. In afternoon, evolutions under steam; evening, breeze freshening; sunset, "Pallas" made number, hull down to leeward; night time, glass falling.
Trifling - - -	ditto - - -	ditto - - -	ditto - - -	Handy, when sufficient way.	Tried sailing on a wind, not sufficient to revolve screw; "Warrior" beat us very much; "Defence" a little, and both with screws raised. In first watch squally, and strong breeze; in trial, "Royal Oak" missed stays.
None - - -	ditto - - -	ditto - - -	ditto - - -	Helm often hard up	In recovering station, "Defence," "Prince Consort," and "Pallas," missed stays; "Prince Consort" wore; the others stayed second time.
About 2° extreme	ditto - - -	ditto - - -	ditto - - -	Handy - - -	Steam evolutions. Evening, exercised reefing, making and shortening sail; night, two reefs in; drizzly.
Trifling - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Admiral made signal about officers and men subscribing for a Sailors' Home at Weymouth.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Firing at targets; working round under steam; good practice; in evening, thick fog set in; light air.
one - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	"Helicon" joined with mails in morning, and left again at 5 p.m.; light airs and foggy.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Light airs and calms; drifting to northward; fog lifting as night set in.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	In afternoon, steam evolutions; light breezes.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Screw sometimes connected, at others disconnected and revolving.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	Slow paying off when screw stopped revolving.	"Royal," breeze beating to windward; "Warrior" gained very much, beat the rest; "Defence" nearly equal; "Royal Oak" good; "Bellerophon" last; screw sometimes stopped revolving; not wind enough for ships that do not lift screws.
Trifling - - -	ditto - - -	Perfect - - -	ditto - - -	Handy - - -	Steaming, performing fleet evolutions, and standing to southward and northward by the wind.
ne - - -	ditto - - -	Good - - -	ditto - - -	ditto - - -	Plain sail, keeping station; performing fleet evolutions under steam, and steaming eastwards; night quarters, firing blank.
Trifling - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	Steaming head to wind from five to six knots; light airs and smooth; exercised shifting top-gallant masts.
ne - - -	ditto - - -	ditto - - -	ditto - - -	ditto - - -	In the morning took "Prince Consort" in tow by single bower chain, at first towing at increased expenditure of about 11 cwt. per hour; as fires fouled, this increased to about 14 cwt. per hour; fore and aft sails, and occasionally foresail set; wind light.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	Handy; slow in paying off with screw set.	In middle of day, cast off "Prince Consort" per signal; plain sail, keeping station; standing to the eastward and northward.
ditto - - -	ditto - - -	ditto - - -	ditto - - -	Handy - - -	Plain sail, keeping station; in evening, "Minotaur," "Warrior," "Royal Oak" and "Pallas," stood up channel under steam and sail; "Bellerophon," "Achilles," "Defence," and "Prince Consort," parted company for Plymouth under sail.

“WARRIOR.”

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship “WARRIOR.”

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minutes Observations by each Instrument.														When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.										
							Bar Instruments.				Mean Number of Oscillations per Minute.	Pendulum.				Oscillations per Minute.	Battens.				Oscillations per Minute.	Clinometer.			Pendulum.			Bar Instrument.			
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum.	Degrees of Heel (Mean).		Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.		Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.						
																										Degrees.				Degrees.	
Provisions.	Stores.	Coals.	Forward.	Aft.	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.			
4 June	-	-	66	1	723	25	5	26 10	H. M.	1 0 p.m.	1 1/2	1 1/2	1	2	9	1 1/2	1 1/2	1	2	9	1 1/2	1 1/2	1	2	9	-	-	-	-	-	-
			Bread,								1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
			38								1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/2	1 1/2	2	3	8	-	-	-	-	-	-
											1 1/2	1 1/2	2 1/2	3	8	1 1/2	1 1/2	2	3	8	1 1/										

“WARRIOR.”

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship “Warrior.”

When observed.	Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.			Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.		
	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	None	None	None	None	None	None		None	None	None	None	None	None	None	None	None	None		None	
Lat.	Long.	Direction.	Force.	Nature; i. e. whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.														
5	0	Yes	-	-	Neither	-	-	None	-	As required.	W.S.W.	6 to 7	Considerable, short sea.	Ahead	-	-	No	-	Yes	-	All	All	All	All	Battens and bar instrument on fore bridge; pendulum on stanchion of wheel, upper deck; clinometer either working irregularly, or not at all, when rolling less than 5°.
6	0	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
6	0	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	None	-	W. 1/4 S.	W.	4	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	None	-	W. 1/4 S.	"	1	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	None	-	"	"	"	Moderate	Starboard bow	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	Fore and aft	-	"	N.W.	1	ditto	ditto	-	-	top - gallant yards across.	-	"	-	"	"	"	"	"
5	5	-	Yes	-	-	"	-	All plain sail	-	W. 1/4 S.	N.N.W.	2	Moderate, long swell.	ditto	-	-	Yes	-	"	-	"	"	"	"	Battens and bar instrument on fore bridge; pendulum on stanchion of wheel, upper deck.
5	5	-	"	-	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	5	-	"	-	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	5	-	"	-	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	5	Yes	-	-	"	-	-	None	-	W. 1/4 S.	W.by N.	1 to 2	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	2	"	-	-	"	-	-	None	-	W. 1/4 S.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
6	5	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	2	"	-	-	"	-	-	None	-	"	W.by S.	1	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	None	-	W.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	8	"	-	-	"	-	-	None	-	"	"	2	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	6	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	2	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	5	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	4	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	5	-	Yes	-	"	-	-	Fore and aft sail	-	"	S.W.	2	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
7	5	Yes	-	No	No	-	-	None	-	W. by S.	W.by S.	2	Slight and irregular.	ditto	-	-	"	-	"	-	"	"	"	"	Battens and bar instrument on fore bridge; pendulum on stanchion of upper deck wheel.
4	0	"	-	-	"	-	-	None	-	W.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	0	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	5	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	0	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	2	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	5	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	8	"	-	-	"	-	-	None	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	0	No	-	Yes	"	-	-	None	-	W.S.W.	N.W. by W.	1	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
2	0	-	-	-	"	-	-	All plain sail	-	W.	N.N.W.	1	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
1	0	-	-	-	"	-	-	ditto	-	W.N.W.	N.	2	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
1	2	-	-	-	"	-	-	ditto	-	"	"	3	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
2	0	-	-	-	"	-	-	ditto	-	"	"	2	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
2	0	-	-	-	"	-	-	ditto	-	W.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	0	-	-	"	"	-	-	ditto	-	W. by N.	N.N.E.	5	Moderate and irregular.	ditto	-	-	"	-	"	-	"	"	"	"	Battens and bar instrument on fore bridge; pendulum on stanchion of wheel, upper deck.
4	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	2	-	-	"	"	-	-	Topsails, courses, jib and foretop staysail.	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	2	-	-	"	"	-	-	ditto	-	"	"	4	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
3	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
3	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
3	8	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	0	-	-	"	"	-	-	ditto	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	5	-	-	"	"	-	-	Topsails, courses, jib and foretop staysail, except first reef of topsails.	-	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	3	-	-	"	"	-	-	ditto	-	W. 1/4 N.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
4	5	-	-	"	"	-	-	ditto	-	W. 1/4 N.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"
5	0	-	-	"	"	-	-	ditto	-	W. 1/4 N.	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"	"

— — — — —

[illegible]

“WARRIOR.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Warrior”—*continued.*

Pitching.		Speed.		Whether			Whether with		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Directions; i. e., whether "Ahead," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.		
Degrees.																							
1	1	5	8	-	-	Yes	- Yes -	1st reef in topsails, courses, and topgallant sails.	W. by N.	N.E.	5	Considerable, short	Starboard beam	- Yes -	- Yes -	All	All	All	All	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.			
1	1	6	0	-	-	"	- Raised -	ditto	"	"	4	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	5	2	-	-	"	- " -	ditto	"	"	3	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	5	0	-	-	"	- " -	All plain sail	N.	E.N.E.	5	ditto	Starboard quarter	- " -	- " -	"	"	"	"				
1	1	4	0	-	-	"	- " -	ditto	S.E. by S.	"	"	ditto	Port beam	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	N.	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	4	4	-	-	"	- " -	ditto	N. 1/2 W.	"	"	ditto	Starboard beam	- " -	- " -	"	"	"	"				
1	1	3	2	-	-	"	- " -	Topsails, jib, and foresail	N.	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	2	0	-	-	"	- " -	ditto	N.	"	"	3 to 4	ditto	- " -	- " -	"	"	"	"				
1	1	0	0	-	-	"	- " -	ditto	W. by N.	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	1	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	1	5	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	2	5	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	1	5	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"	ditto	ditto	- " -	- " -	"	"	"	"				
1	1	3	0	-	-	"	- " -	ditto	"	"	"												

1990 1991 1992 1993 1994

[illegible]

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—continued.

Performance at Sea of Her Majesty's Ship "Warrior"—continued.																							
Pitching, when ascertained.	Forward. Aft.	Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.			
		Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.				Under Sail only.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.		Lee.		
1	1	0	0	No	-	Yes	- Neither -	All plain sail -	S.W.	Calm	0	Moderate and irregular.	Astern	-	Yes	-	Yes	-	All	All	All	All	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
1	1	0	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	W.N.W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	5	-	-	"	-	ditto	S.E.	S.S.W.	1	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	0	-	-	"	-	ditto	S.E. ½ E.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	4	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	5	Yes	-	No	-	-	S.S.E.	S.W.	1	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	None	E. by N.	Light airs from S.W.	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	0	-	-	"	-	ditto	S.W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	5	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	5	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	0	No	-	Yes	-	All plain sail -	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	5	-	-	"	-	ditto	W. by S.	N.E.	1	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	2	0	-	-	"	-	ditto	E.N.E.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	3	0	-	-	Yes	-	Down	W.S.W.	E.N.E.	4 to 5	Considerable and short.	Astern	-	Yes	-	No	-	All	All	All	All	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
1	1	0	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	5	Yes	-	No	-	ditto	W.N.W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	5	-	-	"	-	None	N.W. ½ W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	6	0	-	-	"	-	ditto	N.W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	3	6	No	-	Yes	-	Topsails and jib	N.W. ½ W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	3	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	5	-	-	"	-	Topsails and jib, mainsail and mizen lowered.	"	"	5 to 6	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	5	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	6	5	-	-	"	-	Up	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	6	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	8	-	-	"	-	ditto	"	"	5	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	4	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	2	2	-	-	Yes	-	Up	N.W.	N.E. by E.	2	Moderate	-	-	Yes	-	No	-	All	All	All	All	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
1	1	2	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	2	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	N.E. by N.	Calm	0	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	5	-	-	"	-	ditto	N.N.E.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	5	-	-	"	-	ditto	"	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	2	-	-	Yes	-	Up	N.E.	N.W.	1	Moderate, short	Starboard beam	-	Yes	-	Yes	-	All	All	All	All	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
1	1	0	8	-	-	"	-	ditto	N.N.E.	W.N.W.	1 to 2	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-	-	"	-	ditto	N. by E.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	0	-	-	"	-	ditto	N. ½ E.	West	2	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	8	-	-	"	-	ditto	N.E.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	1	5	-	-	"	-	ditto	N.E. by N.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	8	-	-	"	-	ditto	N.N.W.	"	"	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	Yes	-	No	-	None	Steam evolutions.	Calm	0	ditto	-	-	"	-	"	-	"	"	"	"	
1	1	0	0	-</																			

REPORT, &c. RELATIVE TO

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean				Rolling Motion, ascertained from Five Minute Observations by each Instrument.										When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.								
							Battens.				Mean Number of Oscillations per Minute.	Pendulum.				Bar Instrument.					Battens.			Pendulum.			Bar Instrument.		
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.				
																										Degrees.			
Provisions.	Stores.	Coals.	Forward.	Aft.	H. M.																								
20 June - -	51	$\frac{1}{2}$	519	24 9	26 8	6 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7 0 "	1	1	2	3	9	1 $\frac{1}{4}$	1	2 $\frac{1}{4}$	2 $\frac{3}{4}$	9	1	1	2	3	9	1 $\frac{1}{2}$	9	3	1 $\frac{1}{2}$	9	2 $\frac{1}{2}$	1 $\frac{1}{2}$	9	2 $\frac{1}{2}$					
8 0 "	1	1	2	3	9	1 $\frac{1}{4}$	1	1 $\frac{1}{4}$	2 $\frac{1}{2}$	9	1	1	2	2 $\frac{1}{2}$	9	-	-	-	-	-	-	-	-						
21 June - -	50	$\frac{1}{2}$	518	24 9	26 8	6 0 a.m.	1 $\frac{1}{2}$	$\frac{1}{4}$	1 $\frac{3}{4}$	3	9 $\frac{1}{2}$	1	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{1}{2}$	2	3	9 $\frac{1}{2}$	-	-	-	-	-	-		
						7 0 "	1	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{1}{2}$	2	2 $\frac{1}{2}$	9 $\frac{1}{2}$	1	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	-	-	-	-	-	-	-	
						8 0 "	1 $\frac{1}{4}$	$\frac{1}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	10	1 $\frac{1}{2}$	$\frac{1}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	10	1 $\frac{1}{2}$	$\frac{1}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	10	-	-	-	-	-	-	-	
						9 0 "	1 $\frac{1}{4}$	$\frac{1}{4}$	1 $\frac{1}{2}$	2	10	1	-	1 $\frac{1}{2}$	2	10	1	$\frac{1}{2}$	1 $\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-
						10 0 "	1	$\frac{1}{4}$	1 $\frac{1}{2}$	2	10	1	-	1	2	10	1	$\frac{1}{2}$	1 $\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-
						11 0 "	1 $\frac{1}{4}$	$\frac{1}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	10	1 $\frac{1}{2}$	-	1 $\frac{1}{2}$	2 $\frac{1}{2}$	10	1	$\frac{1}{2}$	1 $\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-
						12 0 "	1 $\frac{1}{2}$	$\frac{1}{4}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$	10	1 $\frac{1}{2}$	-	1 $\frac{1}{2}$	2	10	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-
						1 0 p.m.	1	$\frac{1}{2}$	1 $\frac{1}{2}$	3	9 $\frac{1}{2}$	1	$\frac{1}{2}$	1 $\frac{1}{2}$	3	9 $\frac{1}{2}$	1	$\frac{1}{2}$	1 $\frac{1}{2}$	3	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-
						2 0 "	1 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{2}$	3	9 $\frac{1}{2}$	1 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{2}$	3	9 $\frac{1}{2}$	1 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{2}$	3	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-
						3 0 "	1 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	1 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	1 $\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-
						4 0 "	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	-	-	-	-	-	-	-	-
						5 0 "	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	-	-	-	-	-	-	-	-
						6 0 "	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	-	-	-	-	-	-	-	-
7 0 "	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	-	-	-	-	-	-	-	-						
8 0 "	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	1 $\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	2	9	-	-	-	-	-	-	-	-						
22 June - -	49	$\frac{1}{4}$	508	24 9	26 8	6 0 a.m.	1 $\frac{1}{2}$	$\frac{3}{4}$	2 $\frac{1}{4}$	3	9 $\frac{1}{2}$	1 $\frac{3}{4}$	$\frac{1}{2}$	2 $\frac{1}{4}$	3	9 $\frac{1}{2}$	1	1	2	3	9 $\frac{1}{2}$	-	-	-	-	-	-		
						7 0 "	1 $\frac{1}{4}$	$\frac{3}{4}$	2	3	9 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{1}{2}$	2	3	9 $\frac{1}{2}$	1	1	2	3	9 $\frac{1}{2}$	-	-	-	-	-	-	-	
						8 0 "	1	$\frac{1}{2}$	2	3	10	1 $\frac{1}{2}$	$\frac{1}{2}$	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	
						9 0 "	1 $\frac{1}{4}$	$\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	10	1 $\frac{1}{2}$	$\frac{1}{2}$	2 $\frac{1}{4}$	3 $\frac{1}{2}$	10	1	1	2	3	10	-	-	-	-	-	-	-	
						10 0 "	1	1 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	10	1 $\frac{1}{2}$	1	2 $\frac{1}{2}$	3 $\frac{1}{2}$	10	1	1	2	3	10	-	-	-	-	-	-	-	
						11 0 "	1 $\frac{3}{4}$	1	1 $\frac{1}{2}$	3	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-
						12 0 "	1	1 $\frac{1}{4}$	2 $\frac{1}{4}$	3	10	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{4}$	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-
						1 0 p.m.	1	1	2	3	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-
						2 0 "	1	1	2	3	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-
						3 0 "	1	1	2	2 $\frac{1}{2}$	10	1 $\frac{3}{4}$	1	1 $\frac{3}{4}$	2 $\frac{1}{2}$	10	1	1	2	2 $\frac{1}{2}$	10	-	-	-	-	-	-	-	-
						4 0 "	1	$\frac{3}{4}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$	10	1	$\frac{3}{4}$	1 $\frac{3}{4}$	2 $\frac{1}{2}$	10	1	1	2	2 $\frac{1}{2}$	10	-	-	-	-	-	-	-	-
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
23 June - -	48	$\frac{1}{4}$	505	24 9	26 8	6 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—*continued.*

[illegible]

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																		
							Battens.					Pendulum.					Bar Instrument.			Clinometer.			Pendulum.			Bar Instrument.												
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.								
																															Degrees.					Degrees.		
Days.	Mths.	Tons.	Ft. in.	Ft. in.	H.	M.																																
24 June - -	47 Bread, 19.	4	499	24	9	26	8	6	0 a.m.	$\frac{1}{4}$	$\frac{3}{4}$	1	$1\frac{3}{4}$	9	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	$\frac{1}{2}$	$\frac{1}{2}$	1	2	9	-	-	-	-	-	-	-							
								7	0 "	$\frac{1}{4}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	9	$\frac{1}{2}$	$\frac{3}{4}$	1	2	9	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	-	-	-	-	-	-			
								8	0 "	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$	9	$\frac{1}{2}$	$\frac{3}{4}$	1	2	9	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	-	-	-	-	-	-			
								9	0 "	$\frac{1}{4}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	9	$\frac{1}{2}$	$\frac{3}{4}$	1	2	9	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	9	-	-	-	-	-	-			
								10	0 "	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-			
								11	0 "	$\frac{1}{4}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	10	$\frac{1}{2}$	$\frac{3}{4}$	1	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-			
								12	0 "	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-			
								1	0 p.m.	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-			
								2	0 "	$\frac{1}{4}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	10	$\frac{1}{2}$	$\frac{3}{4}$	1	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-			
								3	0 "	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	$2\frac{1}{2}$	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-			
								4	0 "	$\frac{3}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	10	1	$\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{1}{2}$	10	1	$\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{1}{2}$	10	1	$\frac{3}{4}$	$1\frac{3}{4}$	$2\frac{1}{2}$	10	-	-	-	-	-	-	-		
								5	0 "	$\frac{3}{4}$	$\frac{1}{2}$	$1\frac{1}{4}$	$2\frac{1}{2}$	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	-	-	-	-	-	-	-		
								6	0 "	$\frac{1}{2}$	$\frac{1}{2}$	1	$2\frac{1}{2}$	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	-	-	-	-	-	-	-		
								7	0 "	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	-	-	-	-	-	-	-		
								8	0 "	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	$\frac{1}{2}$	$\frac{1}{2}$	1	2	10	-	-	-	-	-	-	-		
								25 June - -	46 Bread, 18.	Days. 5	493	24	9	26	8	6	0 a.m.	1	$\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{1}{2}$	9	$\frac{1}{2}$	$\frac{1}{2}$	1	2	9	$\frac{3}{4}$	$\frac{1}{2}$	$1\frac{1}{4}$	$2\frac{1}{2}$	9	-	-	-	-	-	-
7	0 "	$\frac{3}{4}$	$\frac{1}{4}$	1	2	9	$\frac{1}{2}$									$\frac{1}{4}$	$\frac{3}{4}$	$1\frac{3}{4}$	9	$\frac{3}{4}$	$\frac{1}{4}$	1	2	9	-	-	-	-	-	-	-	-	-					
8	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
9	0 "	$\frac{1}{2}$	$\frac{1}{2}$	1	$1\frac{3}{4}$	9	$\frac{1}{2}$									$\frac{1}{2}$	1	$1\frac{3}{4}$	9	$\frac{3}{4}$	$\frac{1}{2}$	1	2	9	-	-	-	-	-	-	-	-	-	-				
10	0 "	$\frac{1}{2}$	$\frac{1}{2}$	1	2	9	$\frac{1}{2}$									$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{3}{4}$	9	$\frac{3}{4}$	$\frac{1}{2}$	1	2	9	-	-	-	-	-	-	-	-	-	-				
11	0 "	Horizon obscured by a thick fog														Horizon obscured by a fog										-	-	-	-	-	-	-	-	-				
12	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	1	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	0 p.m.	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	1	$1\frac{1}{4}$	$1\frac{3}{4}$	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{1}{2}$	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	1	$1\frac{1}{4}$	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	$1\frac{1}{4}$	2	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
5	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	1	$1\frac{1}{2}$	9 $\frac{1}{2}$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
6	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{3}{4}$	$1\frac{1}{4}$	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	1	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
8	0 "	-	-	-	-	-	$\frac{1}{2}$									$\frac{1}{2}$	1	2	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
26 June - -	45 Bread, 17.	4	490	24	9	26	8									6	0 a.m.	Horizon obscured by a fog										$1\frac{1}{4}$	$1\$									

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior."

Preceding when ascertained.	Speed.	Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.	State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.		
		Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.		Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.		Weather.	Lee.
1	1	8	-	-	Yes	Down	Double-reefed topsails, gaffsails, and jib.	N.N.E.	N.W. by W.	3	Moderate	Port bow	Yes	Yes	All	All	All	All	Battens and bar instrument on forebridge; pendulum on stanchion of upper deck wheel.
1	1	0	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	No	"	None	S.S.E.	W. by N.	3 to 4	ditto	"	"	Square	"	"	"	"	
1	1	0	-	-	"	"	ditto	"	N.W.	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	N.N.E.	W.	4 to 5	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	Yes	"	Topsails, gaffsails, and jibs.	N.N.W.	"	"	ditto	"	"	Yes	"	"	"	"	
1	1	2	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	N. by W. ½ W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	"	"	4	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	Topsails, gaffsails, jibs, and foresail.	N. by W. ¼ W.	W.N.W.	2 to 3	ditto	"	"	"	"	"	"	"	
1	1	2	-	-	"	"	ditto	N. by W. ½ W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	Yes	Down	All plain, except royals and fore jib.	N. ½ W.	W.N.W.	1 to 2	Slight	Port beam	Yes	Yes	All	All	All	All	Battens and bar instrument on forebridge; pendulum on stanchion of upper deck wheel.
1	1	0	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	N. by W. ½ W.	W. by N.	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	N. ½ W.	"	1	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	N. by W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	8	-	-	"	"	Topsails, foresail, gaff, and head sails.	N. by W. ½ W.	W.	2	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	8	-	-	"	"	ditto	N.N.W.	W. by N.	1	ditto	"	"	"	"	"	"	"	
1	1	8	-	-	"	"	Topsails, gaffsails, and head sails.	N. by W. ½ W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	N.	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	N.N.W.	W. by N.	1	ditto	"	"	"	"	"	"	"	
1	1	2	-	-	"	"	Topsails, foresail, gaffsails, and head sails.	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	Topsails, topgallant sails, gaffsails, and headsails.	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	8	-	-	"	"	ditto	"	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	N. by E. ½ E.	Calm	0	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	ditto	N. ½ W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	N.W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	0	-	-	"	"	Topsails, gaffsails, and headsails.	N. by E. ½ E.	"	"	ditto	"	"	"	"	"	"	"	
1	1	8	-	-	"	"	ditto	N. ½ W.	"	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	N.N.E.	W.N.W.	1	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	All plain, except courses	N. by E. ½ E.	N.W.	"	ditto	"	"	"	"	"	"	"	
1	1	5	-	-	"	"	ditto	"	W.N.W.	"	ditto	"	"	"	"	"	"	"	

REPORT, &c., RELATIVE TO

“WARRIOR.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Warrior”—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																	
							Battens.				Mean Number of Oscillations per Minute.	Pendulum.				Bar Instrument.				Clinometer.			Pendulum.			Bar Instrument.													
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.														
																										Degrees.				Degrees.				Degrees.					
Provisions.	Stores.	Coals.	Forward.	Aft.	H.	M.	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.									
	Days.	Days.	Tons.	Ft. in.	Ft. in.																																		
27 June - -	44 Bread, 17.	3	486	24	8	26	7	6	0 a.m.	-	Horizon obscured by a fog	-	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	-	Horizon obscured by a fog	-	-	-	-	-	-	-	-	-	-	-	-								
								7	0 "	-	-	-	-	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
								8	0 "	-	-	-	-	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
								9	0 "	$\frac{1}{4}$	1	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	3	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	-	-	-	-	-	-	-	-		
								10	0 "	$\frac{1}{4}$	1	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	3	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	-	-	-	-	-	-	-	-		
								11	0 "	$\frac{1}{4}$	1	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	3	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	-	-	-	-	-	-	-	-		
								12	0 "	$\frac{1}{4}$	1	$1\frac{1}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	3	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	$\frac{1}{2}$	$\frac{1}{4}$	1	2	10	-	-	-	-	-	-	-	-		
								1	0 p.m.	$\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$3\frac{1}{2}$	10	$\frac{1}{2}$	$1\frac{1}{2}$	2	4	10	$\frac{1}{2}$	$1\frac{1}{2}$	2	4	10	$\frac{1}{2}$	$1\frac{1}{2}$	2	4	10	-	-	-	-	-	-	-	-	-	
								2	0 "	$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{3}{4}$	3	10	$\frac{1}{2}$	$1\frac{1}{2}$	2	3	10	$\frac{1}{2}$	$1\frac{1}{2}$	2	3	10	$\frac{1}{2}$	$1\frac{1}{2}$	2	3	10	-	-	-	-	-	-	-	-	-	
								3	0 "	$\frac{3}{4}$	1	$1\frac{3}{4}$	3	10	1	1	2	3	10	1	1	2	3	10	1	$1\frac{1}{4}$	$2\frac{1}{4}$	3	10	-	-	-	-	-	-	-	-	-	-
								4	0 "	$\frac{3}{4}$	1	$1\frac{3}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	
								5	0 "	$\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{3}{4}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	
								6	0 "	$\frac{1}{2}$	$1\frac{1}{2}$	1	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	
								7	0 "	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	
								8	0 "	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	
								28 June - -	43 Bread, 16.	2	478	24	8	26	7	6	0 a.m.	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	$2\frac{1}{2}$	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	$2\frac{1}{2}$	10	-	-	-	-	-	-	-
7	0 "	$\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	10	$\frac{1}{2}$									1	$1\frac{1}{2}$	3	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	-	-	-	-	-	-	-	-		
8	0 "	$\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$3\frac{1}{2}$	10	$\frac{1}{2}$									$1\frac{1}{2}$	$2\frac{1}{2}$	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	-	-	-	-	-	-	-	-	-		
9	0 "	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	$\frac{1}{2}$									$1\frac{1}{2}$	$2\frac{1}{2}$	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	$\frac{1}{2}$	1	$1\frac{1}{2}$	3	10	-	-	-	-	-	-	-	-	-		
10	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	4	$3\frac{1}{4}$	10	$4\frac{1}{2}$	3	10	4		
11	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	$3\frac{1}{4}$	10	$4\frac{1}{2}$	3	10	$4\frac{1}{2}$	$3\frac{3}{4}$	10	$4\frac{1}{2}$		
12	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	$3\frac{1}{4}$	10	$4\frac{1}{2}$	3	10	$4\frac{1}{2}$	$3\frac{3}{4}$	10	$4\frac{1}{2}$		
1	0 p.m.	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	5	$2\frac{3}{4}$	10	$4\frac{1}{2}$	$2\frac{3}{4}$	10	$4\frac{1}{2}$		
2	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	$4\frac{1}{2}$	3	10	$4\frac{1}{2}$	$2\frac{3}{4}$	10	$4\frac{1}{2}$		
3	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	$4\frac{1}{2}$	3	10	5	$2\frac{3}{4}$	10	5		
4	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	$4\frac{1}{2}$	3	10	5	$2\frac{3}{4}$	10	5		
5	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$		
6	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$		
7	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$		
8	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	$4\frac{1}{2}$	3	10	$4\frac{1}{2}$	3	10	$4\frac{1}{2}$		
29 June - -	42 Bread, 15.	1	475	24	8	26	7									6	0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{1}{2}$	10	$3\frac{3}{4}$	$2\frac{1}{4}$	10	$3\frac{1}{2}$	$2\frac{1}{2}$	10	$3\frac{1}{2}$	$2\frac{1}{2}$
								7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$			
								8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$			
								9	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$			
								10	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$			
								11	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	$2\frac{1}{2}$	10	$4\frac{1}{2}$	$2\frac{1}{2}$	10	$4\frac{1}{2}$			
								12	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	$3\frac{1}{2}$	3	10	$3\frac{1}{2}$	3	10	$3\frac{1}{2}$			
								1	0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	4	3	10	$4\frac{1}{2}$	$2\frac{3}{4}$	10	$4\frac{1}{2}$		
								2	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$3\frac{3}{4}$	10	5	$2\frac{3}{4}$	10	$4\frac{1}{2}$	$2\frac{3}{4}$	10	$4\frac{1}{2}$			
								3	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	19	4	3	10	$4\frac{1}{2}$	3	10	4			
								4	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	$4\frac{1}{2}$	3	10	$4\frac{1}{2}$	$2\frac{3}{4}$	10	$4\frac{1}{2}$			
								5	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	3	10	$4\frac{1}{2}$	$2\frac{3}{4}$	10	$4\frac{1}{2}$			
								6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	$2\frac{3}{4}$	10	4	$2\frac{3}{4}$	10	4	$2\frac{3}{4}$	10	4			
								7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10	$3\frac{1}{2}$	$2\frac{1}{2}$	10	$3\frac{1}{2}$	$2\frac{1}{2}$	10	$3\frac{1}{2}$			
								8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10	$3\frac{1}{2}$	$2\frac{1}{2}$	10	$3\frac{1}{2}$	2	10	$3\frac{1}{2}$			

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—continued.

Speed.		Whether			Whether Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
		Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards. are Braced up.	Weather.	Lee.	Weather.	Lee.		
0	5	-	-	Yes	Down	Topsail, jib, and gaff foresail.	N.N.E.	E.	1	Moderate	Port beam	-	Yes	-	Yes	-	All	All	Battens and bar instru- ment on fore bridge; pendulum on stanchion of upper deck wheel.
0	5	-	-	"	"	ditto	N.N.W.	N.E. by E.	1	ditto	ditto	-	"	-	"	-	"	"	
1	0	-	-	"	"	Topsails and jib	N. by W.	E.	1	Slight	ditto	-	"	-	"	-	"	"	
1	5	-	-	"	"	ditto	N. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
1	0	-	-	"	"	ditto	N. $\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
0	0	-	-	"	"	ditto	N. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
0	0	Yes	-	-	"	None	Steam evolutions.	"	3	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	-	"	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	Yes	"	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	"	Up	Topsail, foresail, gaff, fore and main sail, and jib.	"	E. by S.	2 to 3	ditto	ditto	-	"	-	"	-	"	"	
3	5	-	-	"	"	ditto	S.S.E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	"	"	ditto	S. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	"	"	ditto	$\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	8	-	-	Yes	Up	Single reefed topsails, gaff sails, and head sails.	S. by E.	E.	4 to 5	Considerable	Port beam	-	Yes	-	Yes	-	All	All	Battens and bar instru- ment on fore bridge; pendulum on stanchion of upper deck wheel.
4	0	-	-	"	"	ditto	$\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	2	-	-	"	"	ditto	S.S.E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	5	-	-	"	"	Single reefed topsails, gaff sails, head sails, and courses.	S.W.	"	6	ditto	ditto	-	"	-	"	-	"	"	
3	5	-	-	"	"	ditto	N. by E.	"	"	ditto	Starboard bow	-	"	-	"	-	"	"	
3	8	-	-	"	"	ditto	$\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	5	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	5	-	-	"	"	ditto	N. by E.	"	6	ditto	ditto	-	"	-	"	-	"	"	
4	0	-	-	"	"	Single reefed topsails, gaff sails, head sails, and courses, except lee clew of mainsail.	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	0	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
1	4	2	-	"	"	ditto	N. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	Battens and bar instru- ment on fore bridge; pendulum on stanchion of upper deck wheel.
4	5	-	-	"	"	ditto	$\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
5	0	-	-	"	"	ditto	N. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	8	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
5	5	-	-	"	"	Single reefed topsails, gaff foresail, and head sails.	N. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	0	-	-	"	"	ditto	$\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	5	-	-	Yes	Up	Single reefed topsails, courses, top gallant sails, gaff sails, and jib.	N.E. by N.	E.	6	Considerable	Starboard bow	-	Yes	-	Yes	-	All	All	
4	0	-	-	"	"	ditto	$\frac{1}{2}$ N.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	0	-	-	"	"	ditto	N.N.E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	0	-	-	"	"	ditto	S.	"	"	ditto	Port beam	-	"	-	"	-	"	"	
5	0	-	-	"	"	All plain and fore and aft sails.	S. by W.	E. by S.	"	ditto	ditto	-	"	-	"	-	"	"	
5	2	-	-	"	"	ditto	S. by E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
5	2	-	-	"	"	ditto	$\frac{1}{4}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	6	-	-	"	"	ditto	S. by E. $\frac{1}{2}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
5	0	-	-	"	"	ditto	S.S.E.	"	"	ditto	ditto	-	"	-	"	-	"	"	
4	8	-	-	"	"	ditto	N.E. by N.	E.	5 to 4	ditto	Starboard bow	-	"	-	"	-	"	"	
4	5	-	-	"	"	ditto	N.E. $\frac{1}{2}$ N.	E. by S.	"	ditto	ditto	-	"	-	"	-	"	"	
4	5	-	-	"	"	All plain sail and port studsails.	N.E. $\frac{1}{4}$ N.	"	"	ditto	ditto	-	"	-	"	-	"	"	
2	0	-	-	"	"	ditto	"	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	"	"	ditto	W. by N.	E.	4 to 5	ditto	Port quarter	-	"	-	"	-	"	"	
3	0	-	-	"	"	Topsails and jib	$\frac{1}{2}$ N.	"	"	ditto	ditto	-	"	-	"	-	"	"	
3	0	-	-	"	"	ditto	W.N.W.	"	"	ditto	Port beam	-	"	-	"	-	"	"	
3	0	-	-	"	"	ditto	S. $\frac{3}{4}$ E.	"	"	ditto	ditto	-	"	-	"	-	"	"	

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
							Battens.				Mean Number of Oscillations per Minute.	Pendulum.				Bar Instrument.				Clinometer.			Pendulum.			Bar Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
																										Degrees.				Degrees.				Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Provisions.	Stores.	Coals.	Forward.	Aft.	H. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior."—continued.

[illegible]

“WARRIOR.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Warrior”—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.																	When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.										
							Battens.				Mean Number of Oscillations per Minute.	Pendulum.				Bar Instrument.				Battens.			Pendulum.			Bar Instrument.								
	Starboard.	Port.	TOTAL.	Maximum Roll.	Starboard.		Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.									
																										Degrees.				Degrees.				Degrees.
Provisions.	Stores.	Coals.	Forward.	Aft.	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.						
	Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.																												
4 July	-	37	None	313	24 5	26 4	6 0 a.m.	$\frac{3}{4}$	1	$1\frac{3}{4}$	3	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-			
							7 0 "	1	1	2	4	10	1	1	2	4	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	-	
							8 0 "	1	1	1	3	10	1	1	1	3	10	1	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	
							9 0 "	1	1	2	3	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	-	
							10 0 "	$1\frac{1}{2}$	$1\frac{1}{2}$	2	2	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	-	
							11 0 "	1	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	-	
							12 0 "	1	$\frac{1}{2}$	$1\frac{1}{2}$	3	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	-	
							1 0 p.m.	1	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	1	1	2	3	10	1	1	2	3	10	-	-	-	-	-	-	-	-	-	-	-	
							2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
							5 July	-	36	None	252	24 4	26 3	6 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	$1\frac{1}{4}$	8	$1\frac{3}{4}$	1	8	$1\frac{3}{4}$	1
7 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	$1\frac{1}{2}$	8	2	1	8	$1\frac{1}{2}$	1	8	$1\frac{1}{2}$	1	
8 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	$1\frac{1}{2}$	8	2	1	8	$1\frac{1}{2}$	1	8	$1\frac{1}{2}$	1	
9 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	-	$1\frac{1}{2}$	8	$1\frac{3}{4}$	1	8	$1\frac{1}{2}$	1	8	$1\frac{1}{2}$	1
10 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	-	$1\frac{1}{2}$	8	2	1	8	$1\frac{1}{2}$	1	8	$1\frac{1}{2}$	1
11 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	-	$1\frac{1}{2}$	8	2	1	8	$1\frac{1}{2}$	1	8	$1\frac{1}{2}$	1
12 0 "	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	1	9	$\frac{1}{2}$								0	$\frac{1}{2}$	1	9	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	1	9	-	-	-	-	-	-	-	-	-	-	-	
1 0 p.m.	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	-	$\frac{1}{2}$	10	1	$\frac{1}{2}$	10	$1\frac{1}{4}$	$\frac{1}{2}$	10	$1\frac{1}{4}$	10
2 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	-	$\frac{1}{2}$	10	1	$\frac{1}{2}$	10	$1\frac{1}{4}$	$\frac{1}{2}$	10	$1\frac{1}{4}$	10
3 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	-	-	$\frac{1}{2}$	10	1	$\frac{1}{2}$	10	$1\frac{1}{4}$	$\frac{1}{2}$	10	$1\frac{1}{4}$	10
4 0 "	1	$\frac{3}{4}$	$1\frac{3}{4}$	3	10	1								$\frac{1}{2}$	$1\frac{1}{2}$	3	10	1	$\frac{1}{2}$	$1\frac{1}{2}$	3	10	-	-	-	-	-	-	-	-	-	-	-	-
5 0 "	$1\frac{3}{4}$	$\frac{3}{4}$	$2\frac{1}{2}$	9	$1\frac{1}{2}$	$\frac{1}{2}$								$1\frac{1}{2}$	2	10	1	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-
6 0 "	1	$\frac{1}{2}$	$1\frac{1}{2}$	9	$1\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	1	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-							
7 0 "	$1\frac{3}{4}$	$\frac{1}{2}$	$2\frac{1}{2}$	9	$1\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	1	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-							
8 0 "	$1\frac{3}{4}$	$\frac{1}{2}$	$1\frac{1}{2}$	9	$1\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	1	$\frac{1}{2}$	$1\frac{1}{2}$	2	10	-	-	-	-	-	-	-	-	-	-	-	-	-							

Her Majesty’s Ship “Warrior.”

JOURNAL to accompany ROLLING RETURNS of the Qualifications

SAILING.	Steaming.	Tacking.	Wearing.
The “Warrior” has proved herself this cruise by far the fastest sailer in the fleet, and, with her screw up and sufficient canvas on her, is as handy as one of her length could be. Her gains on the rest of the fleet, on two sailing trials on a wind, are shown in the accompanying diagrams; her improvement on the “Achilles,” since last sailing trials off Lisbon, I attribute to the following causes, viz., her screw being up (whereas last trial it was only raised for the last hour), being nearly the same time out of dock, having nearly the same quantity of coals on board (formerly she had more than 100 tons in excess of “Achilles”), being in better trim (having been able gradually to get her by the stern), and having the sails better set this time than ever they were previously.	There have been no steam trials this cruise, but the “Warrior’s” steaming, under ordinary circumstances, has improved in the same proportion as her sailing, and I anticipated she would have been well up with “Achilles,” and a-head of everything else; her expenditures of coal has been somewhat greater under similar circumstances, which might have been caused by the latter ship having less steam kept in reserve.	I have found the ship tack very well this cruise, in from 6 to 8 minutes, and we have never felt the slightest doubt as to her going round under ordinary circumstances.	The ship takes rather a long time in wearing, but we have had to ease helm to follow the “Minotaur” round. Having the screw up makes a great difference in both these evolutions.

"WARRIOR."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Warrior"—continued.

Pitching when ascertained.	Speed.	Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.	State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
		Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.		If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
Forward.	Aft.									Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "on Bow," "Beam," "Quarter," &c.						
Degrees.	K.	T.															
6	0		Yes			Fore and aft sails	E. by S. $\frac{1}{4}$ S.	N.E.	2 to 3	Slight		Port bow	Yes		All	All	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
6	0		"			ditto	"	"	"	ditto		ditto	"		"	"	
6	0		"			ditto	"	N.E. by N.	3 to 4	ditto		ditto	"		"	"	
6	2		"			ditto	"	"	"	ditto		ditto	"		"	"	
5	0		"			ditto	"	"	"	Moderate		Before port beam	"		"	"	
2	5		Yes			Topsails, foresails, gaffsails, and head sails.	"	"	"	ditto		ditto	"		"	"	
1	5		"			ditto	E. by S.	N.E.	4 to 5	ditto		Port beam	"		"	"	
3	0		"			Topsails, courses, gaffsails, and jib.	"	"	"	ditto		ditto	"		"	"	
3	5		"			ditto	"	"	"	ditto		ditto	"		"	"	
2	5		"			Topsails, courses, gaffsails and jib, except mainsail.	"	N.N.E.	5	Considerable		ditto	"		"	"	
2	5		"			ditto	"	"	"	ditto		ditto	"		"	"	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
3	0		"			ditto	"	"	"	ditto		ditto	"		"	"	
2	8		"			ditto	E. $\frac{1}{4}$ S.	"	"	ditto		ditto	"		"	"	
2	8		"			ditto	"	"	"	ditto		ditto	"		"	"	
2	5		Yes		Down	Topsails, courses, gaff fore-sail, and jib.	E. by N.	N.N.E.	2 to 3	Slight		Port beam	Yes		All	All	
2	4		"		"	ditto	"	"	"	ditto		ditto	"		"	"	
2	5		"		"	ditto	E. by S.	N.E.	"	ditto		ditto	"		"	"	
2	8		"		"	ditto	"	"	"	ditto		ditto	"		"	"	
3	0		"		"	ditto	E. $\frac{3}{4}$ N.	N.N.E.	3	ditto		ditto	"		"	"	
3	2		"		"	Topsails, courses, gaff fore-sail, jib, and gaff main-sail.	E. by N. $\frac{1}{4}$ N.	"	"	ditto		ditto	"		"	"	
3	5		"		"	ditto	E. by N. $\frac{3}{4}$ N.	"	"	Moderate		ditto	"		"	"	
3	5		"		"	ditto	E.N.E.	N. by E.	3 to 4	ditto		ditto	"		"	"	Battens and bar instrument on fore bridge, pendulum on stanchion of upper deck wheel.
3	8		"		"	ditto	"	"	"	ditto		ditto	"		"	"	
3	5		"		"	ditto	E. by N.	N.N.E.	"	ditto		Port bow	"		"	"	
2	5		"		"	ditto	E. $\frac{1}{4}$ S.	"	"	ditto		ditto	"		"	"	
7	2		Yes		"	ditto	E. by N.	"	"	ditto		ditto	"		"	"	
7	5		"		"	All plain sail, except royals	"	"	"	ditto		ditto	"		"	"	
8	0		"		"	ditto	E.	"	"	ditto		ditto	"		"	"	
			"		"	ditto	"	"	"	ditto		ditto	"		"	"	
			"		"	ditto	"	"	"	ditto		ditto	"		"	"	
			"		"	ditto	"	"	"	ditto		ditto	"		"	"	

Spithead, 7 July 1868.

Henry Boys, Captain.

F. Inglis, Staff Commander.

Performances of this Ship, under the following Heads:—

Rolling.	Pitching.	Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.
ling returns have been forwarded. In light winds, with slight swell, the ship will sometimes start rolling for several minutes without any sufficient apparent reason, and then remain perfectly steady for hours, whereas otherwise in a really heavy swell she scarcely move.	Pitching is very slight and easy.	I think she could fight her guns as long as any ship in the fleet, and her heavy upper deck battery longer, but the practice would necessarily not be so good as either "Minotaur's" or "Achilles'" on account of her rolling propensities, but under these circumstances all practice must be very wild.	Weights have been gradually brought aft, and consequently a great improvement has taken place in her sailing qualities, and I believe also in her steaming.	No sea sufficient to wet the upper deck, and the main deck ports might have been opened all the cruise.	The "Warrior" this cruise has been as handy as a ship could possibly be. Once with screw down and topsails on the cap, before the wind, it was necessary to yaw her to keep her astern; rather too much helm was given her; she got the wind a-beam, lost her way, and of course it was necessary to make sail on her again to get way on to pay her head off.

Henry Boys, Captain, H. M. S. "Warrior."

"ROYAL OAK."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "ROYAL OAK."

Pitching when ascertained.		Speed.			Whether			Whether with			Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.								
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	SAIL SET.			Course.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.		Weather.	Lee.						
1	1	6	0	Yes	No	No	-	R.	-	-	None	-	W. 1/2 S.	N.N.W.	2	Slight	-	On starboard bow	-	Yes	-	Yes	-	All	All	All	All	Clinometer useless. The rolling has been ascertained by pendulum, which is placed. The oscillations have also been taken by the pendulum.	
1	1	6	0	"	"	"	-	"	-	-	None	-	W. by S.	N.W. by W.	1 to 2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	5	"	"	"	-	"	-	-	None	-	W. 1/2 S.	W.	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	5	"	"	"	-	"	-	-	None	-	"	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	6	0	"	"	"	-	"	-	-	None	-	W. 1/2 S.	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"	The rolling motion has been taken by battens placed on bridge, and the pitching by battens placed fore and aft.	
1	1	4	0	No	Yes	"	-	"	-	-	Fore and aft sail	-	W. 1/2 S.	S.W.	2	ditto	-	Ahead	-	"	-	"	-	"	"	"	"		
1	1	2	0	"	"	"	-	"	-	-	ditto	-	W. 1/2 N.	"	2	ditto	-	On port bow a little	-	"	-	"	-	"	"	"	"		
1	1	5	0	"	"	"	-	"	-	-	ditto	-	"	"	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	2	No	Yes	"	-	"	-	-	None	-	"	"	0 to 1	ditto	-	ditto	-	"	-	"	-	"	"	"	"	The engine has never been disconnected, except for an hour, although shown in columns as so, which is a mistake made by assistants.	
1	1	5	2	Yes	No	"	-	"	-	-	Fore and aft sail	-	"	"	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	2	Yes	No	"	-	"	-	-	None	-	"	"	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	5	No	Yes	"	-	"	-	-	Fore and aft sail	-	"	"	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	6	5	Yes	No	No	-	R.	-	-	None	-	W.	W.	1	Slight	-	Ahead	-	Yes	-	Yes	-	All	All	All	All	"Royal Oak" cannot fight her guns when rolling 20 1/2 degrees.	
1	1	7	0	"	"	"	-	"	-	-	None	-	"	"	2 to 3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	6	0	"	"	"	-	"	-	-	None	-	"	"	2 to 3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	5	"	"	"	-	"	-	-	None	-	"	"	3	Moderate	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	2	"	"	"	-	"	-	-	None	-	W. 1/2 N.	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	5	No	Yes	Yes	-	No	-	-	All plain sail	-	W.S.W.	N.W.	2	Slight	-	On starboard bow	-	"	-	"	-	"	"	"	"		
1	1	1	5	"	No	"	-	"	-	-	ditto	-	"	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	ditto	-	"	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	0	"	"	"	-	"	-	-	ditto	-	"	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	0	0	"	"	"	-	"	-	-	ditto	-	"	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	0	"	"	"	-	"	-	-	ditto	-	S.W.	Variable	1	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	0	"	"	"	-	"	-	-	ditto	-	W.	N.N.W.	2 to 3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	0	"	"	"	-	"	-	-	ditto	-	"	"	2 to 3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	0	"	"	"	-	"	-	-	ditto	-	W. by N.	N. by W.	1 to 2	ditto	-	ditto	-	"	-	"	-	"	"	"	"	Taken aback at 5 p.m.; head all round compass.	
1	1	4	5	No	No	Yes	-	No	-	-	All plain sail	-	W. by N.	N. by E.	3	Moderate	-	On starboard bow	-	Yes	-	Yes	-	All	All	All	All	Yards trimmed to wind abeam.	
1	1	4	5	"	"	"	-	"	-	-	ditto	-	"	N.E.	3	ditto	-	On starboard beam	-	"	-	"	-	"	"	"	"		
1	1	4	8	"	"	"	-	"	-	-	All plain sail except royals	-	"	"	3 to 4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	8	"	"	"	-	"	-	-	Topsails and foresail	-	"	"	3 to 4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	0	"	"	"	-	"	-	-	ditto	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	ditto	-	W.	N.	4	Slight	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	All plain except royals	-	W. by N.	"	3 to 4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	ditto	-	"	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	5	0	"	"	"	-	"	-	-	Topsails and courses	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	Single reefs and courses	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	ditto	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	0	"	"	"	-	"	-	-	ditto	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	5	"	"	"	-	"	-	-	ditto	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	2	"	"	"	-	"	-	-	ditto	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"	Yards trimmed for one point before the beam.	
1	1	4	2	"	"	"	-	"	-	-	ditto	-	"	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	4	0	No	No	Yes	-	No	-	-	Topsails and jib	-	W. by N.	N. by E.	4	Slight	-	On starboard beam	-	Yes	-	Yes	-	All	All	All	All		
1	1	4	5	"	"	"	-	"	-	-	ditto	-	"	"	4	Moderate	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	3	8	"	"	"	-	"	-	-	ditto	-	"	"	2 to 3	Slight	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	2	"	"	"	-	"	-	-	Topsails and courses	-	"	"	2 to 3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	5	"	"	"	-	"	-	-	ditto	-	"	"	2 to 3	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	0	"	"	"	-	"	-	-	Topsails and jib	-	As requisite	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	0	"	"	"	-	"	-	-	ditto	-	"	N.N.W.	1 to 2	ditto	-	On starboard quarter	-	"	-	"	-	"	"	"	"		
1	1	1	5	"	"	"	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	1	0	"	"	"	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	0	"	"	"	-	"	-	-	ditto	-	"	"	0	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	5	No	"	Yes	-	No	-	-	All plain except royals	-	W. by N.	N. by W.	2	ditto	-	On starboard beam	-	"	-	"	-	"	"	"	"		
1	1	2	5	"	"	"	-	"	-	-	ditto	-	"	N.E.	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
1	1	2	5	"	"	"	-	"	-	-	ditto	-	"	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"	5.15 p.m. made plain sail on starboard tack.	

REPORT, &c. RELATIVE TO

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.										When Ship is under Sail and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
	Provisions.	Stores.	Coals.	Forward.	Aft.		Clinometer.			Maximum Roll.	Mean Number of Oscillations per Minute.	Pendulum.				Oscillations per Minute.	Battens.				Oscillations per Minute.	Clinometer.			Pendulum.			Bar Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
							Starboard.	Port.	TOTAL.			Starboard.	Port.	TOTAL.	Maximum Roll.		Starboard.	Port.	TOTAL.	Maximum.		Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
																															Degrees.	Degrees.	Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</

TRIALS OF THE CHANNEL FLEET IN 1868.

113

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

Journal of Towing and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.																								
Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Disconnected	and Revolving.	Sails	Courses	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.				
Degrees.																								
1	1	4	0	No	No	Yes	No	No	Topsail and topgallant sails.	W. by N.	N.N.E.	2	Moderate	Starboard beam	Yes	Yes	All	All	All	All				
1 1/2	1 1/2	2	0	"	"	"	"	"	Topsails and courses	"	N. by E.	2	ditto	ditto	"	"	"	"	"	"				
1	1	1	0	"	"	"	"	"	Topsails only	"	"	1	ditto	ditto	"	"	"	"	"	"				
1 1/2	1	1	5	"	"	"	"	"	ditto	"	"	1	ditto	On quarter	"	"	"	"	"	"				
2	1 1/2	1	8	"	"	"	"	"	Topsails and topgallant sails.	"	"	1	ditto	ditto	"	"	"	"	"	"				
1 1/2	1	2	2	"	"	"	No	"	ditto	"	"	2	ditto	ditto	"	"	"	"	"	"				
1	1	1	5	"	"	"	"	"	Topsails and courses	"	"	2	Slight	ditto	"	"	"	"	"	"				
1	1	1	5	"	"	"	"	"	ditto	"	"	2	ditto	ditto	"	"	"	"	"	"				
nil	nil	3	5	Yes	"	No	R.	"	Topsails only	"	"	1	ditto	ditto	"	"	"	"	"	"				
1	1	3	5	"	"	"	"	"	No sail	As requisite	Calm	0	ditto	ditto	"	"	"	"	"	"				
1	1	3	5	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
1 1/2	2	3	5	"	"	"	"	"	ditto	As required	"	0	ditto	ditto	"	"	"	"	"	"				
1	1	2	0	No	"	Yes	No	"	Topsails and topgallant sails.	W. by N.	Northerly N. by W.	1	ditto	ditto	"	"	"	"	"	"				
1	1	2	0	"	"	"	"	"	All plain, except royals	"	"	2	ditto	ditto	"	"	"	"	"	"				
1	1	2	5	"	"	"	"	"	Topsails and topgallant sails.	"	"	1	ditto	Weather bow	"	"	"	"	"	"				
-	-	2	5	"	"	"	"	"	Topsails only	"	"	2	ditto	ditto	"	"	"	"	"	"				
-	-	2	5	"	"	"	"	"	ditto	"	N. by E.	2	ditto	ditto	"	"	"	"	"	"				
-	-	2	5	"	"	"	"	"	ditto	"	N.N.E.	2	ditto	ditto	"	"	"	"	"	"				
-	-	3	0	"	"	"	"	"	ditto	"	"	2	ditto	ditto	"	"	"	"	"	"				
1	-	-	-	No	No	Yes	No	No	Topsails and courses	Head to windward.	Calm	0	Moderate	Starboard beam	Yes	Yes	All	All	All	All				
1	-	-	-	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	-	-	-	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	-	-	-	"	"	"	"	"	Topsails only	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	-	-	-	"	"	"	"	"	ditto	"	"	0	Considerable	ditto	"	"	"	"	"	"				
0	-	-	-	Yes	"	No	R.	"	None	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	-	-	-	"	"	"	"	"	ditto	Various	"	0	ditto	ditto	"	No	"	"	"	"				
0	-	-	-	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
1	1	5	-	No	"	Yes	No	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
1 1/2	1	2	0	"	"	"	"	"	All plain sail	S.W. by W.	N.W. by W.	1 to 2	Moderate	Starboard bow	"	Yes	"	"	"	"				
1 1/2	1	1	0	"	"	"	"	"	Topsails and forecourse	"	"	2	ditto	ditto	"	"	"	"	"	"				
1 1/2	1	1	5	"	"	"	"	"	Topsails only	"	"	1	Very moderate	ditto	"	"	"	"	"	"				
1 1/2	2	2	2	"	"	"	"	"	ditto	"	"	1	ditto	ditto	"	"	"	"	"	"				
1 1/2	1	1	5	"	"	"	"	"	ditto	"	"	2	ditto	ditto	"	"	"	"	"	"				
1 1/2	1	1	5	"	"	"	"	"	ditto	"	"	1	ditto	ditto	"	"	"	"	"	"				
2	2	0	"	"	"	"	"	"	ditto	"	"	1 to 2	ditto	ditto	"	"	"	"	"	"				
1	2	0	"	"	"	"	"	"	ditto	W.S.W.	N.W.	1 to 2	ditto	ditto	"	"	"	"	"	"				
1	2	5	No	No	Yes	No	No	No	All plain	*N.W. by W.	*Calm	0-2	Very moderate	Starboard bow	Yes	Yes	All	All	All	All				
1	1	5	"	"	"	"	"	"	Topsails and topgallant sails.	W.S.W.	N.W. by W.	1	Long, moderate	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	Topsails	Westward	Calm	0 to 1	Considerable, long	ditto	"	"	"	"	"	"				
1	1	0	"	"	"	"	"	"	None	"	"	0	ditto	Starboard beam	"	"	"	"	"	"				
1	0	0	"	"	"	"	"	"	Furled	S.W. to W.	"	0	Heavy, long	ditto	"	"	"	"	"	"				
5	0	0	Yes	"	"	"	R.	"	ditto	Various	"	0	ditto	ditto	"	"	"	"	"	"				
1 1/2	5	0	"	"	"	"	"	"	ditto	W. by N.	0	0	ditto	ditto	"	No	"	"	"	"				
1 1/2	5	2	"	"	"	"	"	"	ditto	"	0	0	ditto	ditto	"	"	"	"	"	"				
1 1/2	4	5	"	"	"	"	"	"	ditto	Various	0	0	ditto	ditto	"	"	"	"	"	"				
1 1/2	3	0	"	"	"	"	"	"	ditto	"	Westerly	1	ditto	ditto	"	"	"	"	"	"				
1 1/2	3	3	"	"	"	"	"	"	ditto	"	"	1	ditto	ditto	"	"	"	"	"	"				
1 1/2	3	5	"	"	"	"	"	"	ditto	"	"	1	ditto	ditto	"	"	"	"	"	"				
0	0	5	No	"	"	Yes	No	No	All plain sail	Calm	Calm	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	Topsails	"	"	0	ditto	ditto	"	Yes	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"				
0	0	5	"	"	"	"	"	"	ditto	"	"	0	ditto											

* Course, W.S.W.; wind, N.W. by W.; force, 2 (made a mistake in column marked thus *).

† Where "doubtful" is marked it means that the ship rolled so heavily that it would be running a great risk to move the guns at all, although in a case of emergency, and watching the rolls, the guns on the highest side may be used.

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

DATE.	On Board.					Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.										When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Provisions. Stores. Coals. Forward. Aft.						Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Battens.				Clinometer.			Pendulum.			Bar Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
							Starboard.	Port.	TOTAL.	Maximum Roll.		Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
																															Degrees.				Degrees.				Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

Time when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.			Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Hour.	Min.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.																					
Day.	Alt.																										
1	0	0	0	No	No	Yes	No	-	-	Topsails only	Calm	Calm	0	Long, heavy	Starboard quarter	Yes	Square	None	None	None	None					Might fight guns during interval of roll.	
1	0	0	0	"	"	"	"	-	-	ditto	⊕	0	0	ditto	ditto	"	"	4 after ones.	4 after ones.	All	All						
1	0	0	0	"	"	"	"	-	-	ditto	Calm	0	0	Considerable	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and foresail	"	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails only	"	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and top-gallant sails	Head N.W.	0	0	ditto	Starboard beam	"	"	All	All	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	Head W.	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	Head S.W.	0	0	ditto	On starboard quarter	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	W.	0	0	ditto	ditto	"	Yes	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	W. by N.	0	0	ditto	Starboard beam	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails on cap	W.	0	0	ditto	ditto	"	"	4 after ones.	4 after ones.	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	Various	0	0	ditto	ditto	"	"	All	All	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	Head W. ⊕	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and top-gallant sails	"	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails on cap	"	0	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	No	No	Yes	No	-	-	Topsails and foresail	Head N.W.	0	0	Slight	Starboard beam	Yes	Yes	All	All	All	All					Yards trimmed to wind abeam.	
1	0	0	0	"	"	"	"	-	-	Topsails	N.W.	N.E.	1	Moderate	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and foresail	"	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	Yes	"	No	R.	-	-	Furling sails	W. by N.	"	0 to 1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Sails furled	Various	Calm	0	Very slight	ditto	"	Square	"	"	"	"						Furled sails; commenced steaming; performing evolutions under steam.
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	No	"	Yes	No	-	-	Topsails	Head	"	0	Moderate	ditto	"	No	"	"	"	"					Banked fires; made sail to topsails.	
1	0	0	0	"	"	"	"	-	-	ditto	round	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	compass	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	Starboard beam and bar.	"	Yes	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	Starboard beam	"	No	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	Yes	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	0	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	No	No	Yes	No	-	-	Topsails	Head W.	Calm	-	Moderate	On port beam	Yes	No	All	All	All	All						9 P.M.
1	0	0	0	"	"	"	"	-	-	Topsails and top-gallant sails	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and top-gallant sails	"	"	-	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and foresail	N. ½ W.	W.N.W.	1	ditto	ditto	"	Yes	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails	"	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and top-gallant sails	"	"	0 to 1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	"	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	N. by W.	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	N.	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	ditto	N.	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	No	No	Yes	No	-	-	Single reefs and courses	N. by W.	W.N.W.	1	Moderate	On port bow	Yes	Yes	All	All	All	All					No remarks to offer.	
1	0	0	0	"	"	"	"	-	-	Topsails and foresail	"	"	2	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails	"	"	1	ditto	ditto	"	"	"	"	"	"						
1	0	0	0	"	"	"	"	-	-	Topsails and courses	N.N.E.	W. by N.	1	Considerable	ditto	"	"	"	"	"	"						
1																											

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—*continued.*

DATE.	On Board.					Draft of Water, as nearly as can be ascertained.	Time of taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Provisions.	Stores.	Coals.	Forward.	Aft.			Clinometer.				Mean Number of Oscillations per Minute.	Pendulum.				Battens.				Clinometer.			Pendulum.			Bar Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
								Starboard.	Port.	TOTAL.	Maximum Roll.		Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
																																Degrees.				Degrees.				Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Days.	Mths.	Tns. cwt.	Ft. in.	Ft. in.	H.	M.	None on board																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							
JOURNAL OF THE ROYAL OAK																							

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—*continued.*

[illegible]

TRIALS OF THE CHANNEL FLEET IN 1868.

119

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

Pitching, when ascertained.			Speed.			Whether			Whether with Screw Raised or Disconnected and Revolving.			SAIL SET.			Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.					Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
Degrees.	K.	T.																									
1	1	3	0	No	No	Yes	-	S. D.	-	Topsails	-	W.S.W.	N.W. by W.	4 to 3	Slight	-	Starboard beam	-	Yes	-	Yes	-	All	All		All	
1	1	2	0	"	"	"	-	"	-	Topsails and topgallant sails	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	5	"	"	"	-	"	-	Topsails and foresails	-	W. by S.	N.W.	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	2	"	"	"	-	"	-	Topsails	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	0	"	"	"	-	"	-	ditto	-	"	"	3 to 4	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
0	0	1	0	"	"	"	-	"	-	All plain sail	-	W.S.W.	"	"	ditto	-	Bow	-	"	-	"	-	"	"	"	"	
0	0	3	0	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	11 a.m. made all plain sail, to try rate of sailing.
0	0	1	5	"	"	"	-	"	-	ditto	-	N. $\frac{1}{2}$ E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	5	"	"	"	-	"	-	ditto	-	N.E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	1.15 p.m. tacked.
1	1	1	5	"	"	"	-	"	-	ditto	-	Head N.E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	0	0	"	"	"	-	"	-	Topsails	-	"	"	"	ditto	-	Beam	-	"	-	"	-	"	"	"	"	3.5 p.m. shortened sails to topsails and hove to.
1	1	0	5	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	4 p.m. hove to; commu- nicating with Her Ma- jesty's ship "Pallas."
1	1	0	5	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	5 p.m. hove to.
1	1	2	0	"	"	"	-	"	-	Tops and foresail	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	0	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	0	No	No	Yes	-	S. D.	-	Topsails topgallant	-	N.E. by E.	-	-	Moderate	-	Port beam	-	Yes	-	Yes	-	All	All	All	All	8 p.m. horizon not clear.
1	1	1	5	"	"	"	-	"	-	Top and topgallant	-	"	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	2	"	"	"	-	"	-	All sail less reef	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	5	"	"	"	-	"	-	All plain sail less reef	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	0	"	"	"	-	"	-	ditto	-	N.N.E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	0	"	"	"	-	"	-	Topsail fore and topgallant	-	N. by E.	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	0	"	"	"	-	"	-	Topsails	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	8	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	2	"	"	"	-	"	-	ditto	-	N.E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
2	2	1	8	"	"	"	-	"	-	ditto	-	"	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
2	2	2	5	"	"	"	-	"	-	Second reefed topsail	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2	0	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	1	5	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	1	2		"	"	"	-	"	-	ditto	-	"	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"	5 p.m. reefed topsails two reefs.
0	1	0	No	No	Yes	-	S. D.	-	-	Topsails and foresail	-	N.E.	N.W.	2	Long	-	Starboard beam	-	Yes	-	Yes	-	All	All	All	All	
0	1	0	"	"	No	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
5	0	5	"	"	"	"	-	"	-	Topsail and topgallant sail	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
0	5	0	Yes	Yes	"	-	R.	-	-	Furled	-	"	"	1	ditto	-	ditto	-	"	-	No	-	"	"	"	"	8.10 a.m. shortened and furled sails; got up steam. 8.20 a.m. com- menced steaming.
0	5	0	"	"	"	-	"	-	-	ditto	-	N.N.E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
0	5	0	"	"	"	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
0	1	4	2	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	No	No	Yes	-	S. D.	-	-	Topsails and topgallant	-	N.E.	"	2	ditto	-	ditto	-	"	-	"	-	"	"	"	"	Describing steam tactics.
1	3	5	"	"	"	-	"	-	-	Topsails	-	S.S.W.	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
5	1	5	"	"	"	-	"	-	-	Topsails courses	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	1.15 made all plain sail.
0	1	5	"	"	"	-	"	-	-	Topsails and topgallant	-	"	"	3	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
0	2	0	"	"	"	-	"	-	-	Topsails	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
0	2	0	"	"	"	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	4	5	No	No	Yes	-	S. D.	-	-	Second topsails	-	W.S.W.	N.W.	4	Heavy	-	Starboard beam	-	Yes	-	Yes	-	All	All	All	All	
1	3	5	"	"	"	-	"	-	-	Second topsail and foresail	-	S.W. by W.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	"	"	"	-	"	-	-	Second reefed top and courses	-	W.S.W.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	5	"	"	"	-	"	-	-	Second reefed topsails	-	S.W. by W.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	5	"	"	"	-	"	-	-	Second reefed topsail and foresail.	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	"	"	"	-	"	-	-	Second reefed topsails and courses.	-	"	"	5	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	"	"	"	-	"	-	-	Second reefed top and courses	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	"	"	"	-	"	-	-	Second reefed topsails	-	W.S.W.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	11.30 a.m. both rolling battens were broken by accident.
1	3	5	"	"	"	-	"	-	-	ditto	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	8	"	"	"	-	"	-	-	Second reefed top and foresail	-	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	"	"	"	-	"	-	-	Second reefed topsail	-	S. by W.	"	4	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
1	3	0	"	"	"	-	"	-	-	ditto	-	N.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
2	5	"	"	"	"	-	"	-	-	Second reefed t p and courses.	-	N.E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"	
2	5	"	"	"	"	-	"	-	-	Second reefed topsails	-	N.N.E.	"	5	ditto	-	ditto	-	"	-	"	-	"	"	"	"	5 p.m. battens repaired. 5.20 p.m. wore.

REPORT, &c. RELATIVE TO

“ROYAL OAK.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Royal Oak”—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.								
							Clinometer.					Pendulum.					Battens.					Clinometer.			Pendulum.			Battens Instrument		
	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.					
																										Degrees.				
Provisions.	Stores.	Coals.	Forward.	Aft.																										
	Days.	Mths.	Tns. Cwt.	Ft. in.	Ft. in.	H. M.																								
24 June - -	90	-	284 7	-	-	6 0 a.m.	-	-	-	-	-	1	½	1½	3	5	2	1	3	5	6	-	-	-	-					
						7 0 "	-	-	-	-	-	1½	1	2½	4	6	2	1½	3½	5	6	-	-	-	-	-	-			
						8 0 "	-	-	-	-	-	1	1	2	3	6	1½	¾	2¼	3	5	-	-	-	-	-	-	-		
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						12 0 noon.	-	-	-	-	-	1	1	2	4	5	- ½	- ½	1	3	5	-	-	-	-	-	-	-	-	
						1 0 p.m.	-	-	-	-	-	2	3	5	8	9	3 ½	4 ½	10	8	-	-	-	-	-	-	-	-	-	
						2 0 "	-	-	-	-	-	2	2	4	7	8	2	3	5	6	-	-	-	-	-	-	-	-	-	
						3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						4 0 "	-	-	-	-	-	3	2	5	6	7	3	1½	4½	5	6	-	-	-	-	-	-	-	-	
						5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
						25 June - -	90	-	282 6	-	-	6 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
8 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
9 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
10 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
11 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12 0 noon.	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 0 p.m.	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5 0 "	-	-	-	-	-							2	1	3	4	6	1	½	1½	3	5	-	-	-	-	-	-	-	-	
6 0 "	-	-	-	-	-							1	½	1½	3	5	1	¾	1¾	3	5	-	-	-	-	-	-	-	-	-
7 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8 0 "	-	-	-	-	-							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26 June - -	89	-	280 0	-	-							6 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
						7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
						10 0 "	-	-	-	-	-	1½	½	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-		
						11 0 "	-	-	-	-	-	1	1	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-		
						12 0 noon.	-	-	-	-	-	1	1	2	3	5	-	-	-	-	-	-	-	-	-	-	-	-		
						1 0 p.m.	-	-	-	-	-	3	2	5	5	7	-	-	-	-	-	-	-	-	-	-	-	-		
						2 0 "	-	-	-	-	-	2½	1½	4	4	7	-	-	-	-	-	-	-	-	-	-	-	-		
						3 0 "	-	-	-	-	-	3	2	5	7	7	-	-	-	-	-	-	-	-	-	-	-	-		
						4 0 "	-	-	-	-	-	4	3	7	8	7	-	-	-	-	-	-	-	-	-	-	-	-		
						5 0 "	-	-	-	-	-	3	3	7	7	7	-	-	-	-	-	-	-	-	-	-	-	-		
						6 0 "	-	-	-	-	-	4	3	7	8	7	-	-	-	-	-	-	-	-	-	-	-	-		
						7 0 "	-	-	-	-	-	3	3	7	7	7	-	-	-	-	-	-	-	-	-	-	-	-		
						8 0 "	-	-	-	-	-	4	3	7	9	8	-	-	-	-	-	-	-	-	-	-	-	-		

TRIALS OF THE CHANNEL FLEET IN 1868.

121

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

Forward.		Aft.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.			Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
						Under Steam only.	Under Steam and Sail.	Under Sail only.								Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
		2	2	No	No	Yes	-	S. D.	-	Topsails and courses	-	N.	W.N.W.	2	Slight	-	-	Port bow	-	Top-gallant yards.	-	Yes	-	All	All	All	All.	Took battens when fog lifted. 8.15. Furl'd sails, got up steam. 9.0. Commenced steaming, as requisite for target practice. 10.0. Swell slight on bow. Very little roll. 1.0. Commenced steam tactics.
		1	8	"	"	"	-	"	-	Topsails	-	"	"	"	ditto	-	-	ditto	-	"	-	"	"	"	"	"	"	
		2	0	"	"	"	-	"	-	Topsails and foresail	-	W.	"	"	ditto	-	-	ditto	-	"	-	"	"	"	"	"	"	
		-	-	Yes	"	No	-	R.	-	Furled	-	As requisite	"	"	ditto	-	-	ditto	-	"	-	No	-	"	"	"	"	
		1	1	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	-	ditto	-	"	-	"	"	"	"	"	"	
		1	1	"	"	"	-	"	-	ditto	-	"	"	3	ditto	-	-	ditto	-	"	-	"	"	"	"	"	"	
		2	5	"	"	"	-	"	-	ditto	-	"	"	"	ditto	-	-	ditto	-	"	-	"	"	"	"	"	"	
		3	0	No	"	Yes	-	S. D.	-	Topsails and courses	-	W.N.W.	W.S.W.	2	ditto	-	-	ditto	-	"	-	"	"	"	"	"	"	
		1	8	"	"	"	-	"	-	All plain, less royal	-	N.W.	"	2	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		2	2	"	"	"	-	"	-	ditto	-	N.N.W.	"	2	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		2	2	"	"	"	-	"	-	Topsails and courses	-	"	W.	2	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	1	"	"	"	-	"	-	ditto	-	"	"	2	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		2	0	No	No	Yes	-	S. D.	-	Topsails and courses	-	N. W. ½	W.	1	Very slight	-	-	Port bow	-	Yes	-	Yes	-	All	All	All	All	No perceptible roll all day. 7.30. Communicated with Her Majesty's Ship "Helicon."
		2	0	"	"	"	-	"	-	Topsails	-	"	"	1	ditto	-	-	Ahead	-	"	-	"	"	"	"	"	"	
		1	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	ditto	-	N. by W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	Topsails and topgallant sails.	-	"	"	1	ditto	-	-	Port bow	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	Topsails and foresail	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	Topsails	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	Topsails and topgallant sails.	-	N.N.W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	ditto	-	Head	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	Topsail, topgallant sail, and foresail.	-	N.W. by N.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	-	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	-	"	"	"	-	"	-	ditto	-	N.W. by W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	0	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	1	"	"	"	-	"	-	ditto	-	N.N.W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	2	"	"	"	-	"	-	All plain sail	-	N.N.W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		2	0	No	No	Yes	-	S. D.	-	Topsails and foresail	-	N. N. W.	Westerly	1	Very slight	-	-	Ahead	-	Yes	-	Yes	-	All	All	All	All	Rolling slightly all day; thick fog, that the battens could not be used in consequence. Observed roll by battens, when fog allowed its being done.
		1	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		1	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	N. by W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	Topsails and courses	-	"	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	Topsails	-	N. by W.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	ditto	-	N.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	Topsails and main topgallant sail.	-	Head.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	
		0	5	"	"	"	-	"	-	Topsails and foresail	-	N.	"	1	ditto	-	-	ditto	-	-	-	"	"	"	"	"	"	

REPORT, &c. RELATIVE TO

“ROYAL OAK.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Royal Oak”—*continued.*

[illegible]

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—*continued.*

Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.																															
Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.								
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.											
Degrees.																															
1	1	-	-	No	No	Yes	Screw disconnected.	Topsails	-	-	-	Head	Calm	0	Very slight	-	Eastward	-	-	Yes	-	Yes	-	All	All	All	All	Took observations by batten when fog allowed.			
		-	-	"	"	"	"	ditto	-	-	-	"	"	0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		Thick fog during early part of day; horizon obscured.		
		-	-	"	"	"	"	ditto	-	-	-	"	"	0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			Fog cleared.	
		-	-	"	"	"	"	ditto	-	-	-	"	"	0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				11.30. Shortened and furl- ed sail; less steam.
		-	-	"	"	"	"	ditto	-	-	-	"	"	0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				
		-	-	"	"	"	"	ditto	-	-	-	Head	"	0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	4.30. Banked fires; made all plain sail; short- ened sail to topsails.			
		-	-	Yes	No	Screw raised	Sails furl- ed	-	-	-	Easterly	{ Light airs from N.E. }	0	- ditto	-	- ditto	-	-	"	-	No	-	"	"	"	"	8.0. Ship rolling while wearing.				
		-	-	"	"	"	- ditto	-	-	-	"		0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
		-	-	"	"	"	- ditto	-	-	-	"		0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
		-	-	"	"	"	- ditto	-	-	-	S.E. by S.		0	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"					9.0. Made all plain sail to try rate of sailing.
1	1	3	0	No	"	Yes	Screw discon- nected.	Topsails and courses	-	-	S.S.E.	Easterly	2	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1	2	8	"	"	"	"	- ditto	-	-	S.E. ½ S.	"	2	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1	3	0	"	"	"	"	- ditto	-	-	"	"	2	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1	3	2	No	No	Yes	Screw discon- nected.	Topsails and courses	-	-	S.S.E.	Easterly	4	Considerable	-	Port bow	-	-	Yes	-	Yes	-	Yes	Yes	Yes	Yes				8.0. Ship rolling while wearing.	
1	1	3	8	"	"	"	"	1st top and courses -	-	-	"	E.	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	8.0. Ship rolling while wearing.				
1	1	4	5	"	"	"	"	1st royal top and topgal- lant.	-	-	"	"	4	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		8.0. Ship rolling while wearing.			
1	1 ½	1	8	"	"	"	"	1st royal top courses	-	-	N. by E.	"	-	- ditto	-	Starboard bow	-	-	"	-	"	-	None	"	"	"			8.0. Ship rolling while wearing.		
1 ½	1	2	8	"	"	"	"	1st royal top, topgallant, and courses.	-	-	"	"	5	- ditto	-	- ditto	-	-	"	-	"	-	"	All	All	All				8.0. Ship rolling while wearing.	
2	½	3	2	"	"	"	"	1st royal topsails	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	8.0. Ship rolling while wearing.				
1	½	3	2	"	"	"	"	- ditto	-	-	"	"	6	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		8.0. Ship rolling while wearing.			
1	1	4	0	"	"	"	"	1st royal top and foresail	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			8.0. Ship rolling while wearing.		
1	1	4	0	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				8.0. Ship rolling while wearing.	
1	1	4	5	"	"	"	"	1st royal top and courses	-	-	N.	E. by S.	5	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	8.0. Ship rolling while wearing.				
1	1	4	5	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		8.0. Ship rolling while wearing.			
1	1	4	5	"	"	"	"	1st royal top and topgal- lant sail.	-	-	N.N.E.	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			8.0. Ship rolling while wearing.		
2	1 ½	4	2	"	"	"	"	1st royal tops and foresail	-	-	"	"	6	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				8.0. Ship rolling while wearing.	
1	1	4	2	"	"	"	"	- ditto	-	-	N.E. by N.	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	8.0. Ship rolling while wearing.				
1	1	4	2	No	No	Yes	Screw discon- nected.	1st royal top and courses	-	-	N.E. by N.	E. by S.	4	Considerable	-	Starboard beam	-	-	Yes	-	Yes	-	None	All	All	All		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	3	5	"	"	"	"	1st royal top and foresail	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	3	8	"	"	"	"	- ditto	-	-	S.E. ½ E.	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	3	0	"	"	"	"	- ditto	-	-	"	"	5	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1	3	5	"	"	"	"	All plain sail	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	4	0	"	"	"	"	All plain sail, fore royal	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	None	"	"			9.0. Made all plain sail to try rate of sailing.		
2	2	4	0	"	"	"	"	All plain sail	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
2	1	3	5	"	"	"	"	- ditto	-	-	N.N.E.	"	4	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	4	0	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	5	0	"	"	"	"	- ditto	-	-	N.E. ½ E.	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	3	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	0	5	"	"	"	"	- ditto	-	-	None	"	4	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	0	0	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	5	"	"	"	"	- ditto	-	-	S. ½ E.	"	-	- ditto	-	- ditto	-	-	"	-	"	-	All	All	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"				9.0. Made all plain sail to try rate of sailing.	
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"	9.0. Made all plain sail to try rate of sailing.				
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"		9.0. Made all plain sail to try rate of sailing.			
1	1 ½	2	8	"	"	"	"	- ditto	-	-	"	"	-	- ditto	-	- ditto	-	-	"	-	"	-	"	"	"	"			9.0. Made all plain sail to try rate of sailing.		
1	1																														

“ ROYAL OAK.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “ Royal Oak”—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.													
							Clinometer.					Pendulum.					Battens.			Clinometer.			Pendulum.			Bar Instrument.							
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.			
																															Degrees.		
	Days.	Mths.	Tns. cwt.	Ft. in.	Ft. in.	H. M.	None on board																										
30 June	-	-	86	-	244 3	-	-	6 0 a.m.	-	-	-	-	-	-	2	3	5	7	7	2	4	6	7	7	-	-	-	-	-	-	-	-	-
								7 0 "	-	-	-	-	-	1	2	3	5	6	2	3	5	6	7	-	-	-							
								8 0 "	-	-	-	-	-	3	1	4	6	7	2	1	3	4	7	-	-	-							
								9 0 "	-	-	-	-	-	1	1 1/2	1 1/2	3	6	2	1	3	4	4	6	-	-	-						
								10 0 "	-	-	-	-	-	2 1/2	1 1/2	3 1/2	4	7	3	1	4	5	5	6	-	-	-						
								11 0 "	-	-	-	-	-	2	2	4	6	7	2	2	4	5	7	-	-	-							
								12 0 noon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								1 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								6 0 "	-	-	-	-	-	1	2	3	5	5	6	2	3	5	6	6	-	-	-						
								7 0 "	-	-	-	-	-	2	3	5	6	7	3	4	5	6	7	-	-	-							
								8 0 "	-	-	-	-	-	3	4	7	9	9	2	4	6	8	9	-	-	-							
1 July	-	-	86	-	223 6	-	-	6 0 a.m.	-	-	-	-	-	2 1/2	3	5 1/2	8	8	2	3	5	7	8	-	-	-	-	-	-	-	-	-	
								7 0 "	-	-	-	-	-	2	4	6	8	9	2	3	5	7	8	-	-	-							
								8 0 "	-	-	-	-	-	1	2	3	5	7	2	3	5	6	7	-	-	-							
								9 0 "	-	-	-	-	-	1 1/2	2 1/2	4	6	8	2	3	5	6	8	-	-	-							
								10 0 "	-	-	-	-	-	2	3	5	7	8	3	4	7	9	8	-	-	-							
								11 0 "	-	-	-	-	-	1	2	3	5	8	1	2	3	5	8	-	-	-							
								12 0 noon	-	-	-	-	-	2	3	5	6	7	1	2	3	4	7	-	-	-							
								1 0 p.m.	-	-	-	-	-	4	5	9	12	8	5	6	11	12	8	-	-	-							
								2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
								8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
2 July	-	-	85	-	176 11	-	-	6 0 a.m.	-	-	-	-	-	1	1 1/2	2 1/2	3	6	1	2	3	4	6	-	-	-	-	-	-	-	-	-	
								7 0 "	-	-	-	-	-	2	2	4	5	7	3	4	7	6	6	-	-	-							
								8 0 "	-	-	-	-	-	1	1	2	4	6	1	1 1/2	2 1/2	5	7	-	-	-							
								9 0 "	-	-	-	-	-	2	3	5	7	7	1	2	3	4	6	-	-	-							
								10 0 "	-	-	-	-	-	1	1	2	3	5	1	2	3	4	5	-	-	-							
								11 0 "	-	-	-	-	-	2	2	4	5	6	2	2	4	6	6	-	-	-							
								12 0 noon	-	-	-	-	-	2 1/2	2	4 1/2	6	6	2	2	4	6	6	-	-	-							
								1 0 p.m.	-	-	-	-	-	3	3 1/2	6 1/2	8	8	2	3	7	7	-	-	-								
								2 0 "	-	-	-	-	-	2	2	4	6	7	2	2	4	5	6	-	-	-							
								3 0 "	-	-	-	-	-	1	1 1/2	2 1/2	5	6	2	2	4	4	6	-	-	-							
								4 0 "	-	-	-	-	-	2	2	4	6	6	2	2	4	4	6	-	-	-							
								5 0 "	-	-	-	-	-	2 1/2	3	5 1/2	9	7	2	2	4	6	7	-	-	-							
								6 0 "	-	-	-	-	-	2	2	4	6	6	2	2	4	6	6	-	-	-							
								7 0 "	-	-	-	-	-	3	3	6	8	7	2	3	5	7	7	-	-	-							
								8 0 "	-	-	-	-	-	2	2	4	7	6	1	1 1/2	2 1/2	5	6	-	-	-							
3 July	-	-	85	-	166 11	-	-	6 0 a.m.	-	-	-	-	-	2	2	4	7	6	1 1/2	2	3 1/2	6	6	-	-	-	-	-	-	-	-	-	
								7 0 "	-	-	-	-	-	4 1/2	5	9 1/2	6	8	4	5	9	17	8	-	-	-							
								8 0 "	-	-	-	-	-	2	2	4	8	6	2	2	4	7	8	-	-	-							
								9 0 "	-	-	-	-	-	1 1/2	2	3 1/2	5	6	2	2	4	8	6	-	-	-							
								10 0 "	-	-	-	-	-	1	1 1/2	2 1/2	4	6	1	1	2	5	6	-	-	-							
								11 0 "	-	-	-	-	-	2	3	5	6	6	2	2	3	5	6	-	-	-							
								12 0 noon	-	-	-	-	-	1 1/2	3	4 1/2	7	6	2	2	4	5	6	-	-	-							
								1 0 p.m.	-	-	-	-	-	3	2	5	7	6	2	2	4	6	6	-	-	-							
								2 0 "	-	-	-	-	-	1 1/2	2	3 1/2	5	6	1	2	3	4	6	-	-	-							
								3 0 "	-	-	-	-	-	3	3	6	8	6	2	3	5	7	7	-	-	-							
								4 0 "	-	-	-	-	-	2 1/2	3	5 1/2	7	6	2	1 1/2	3 1/2	6	7	-	-	-							
								5 0 "	-	-	-	-	-	1	1 1/2	2 1/2	5	7	2	2	4	6	6	-	-	-							
								6 0 "	-	-	-	-	-	2	2 1/2	4 1/2	6	7	1	1 1/2	2 1/2	5	6	-	-	-							
								7 0 "	-	-	-	-	-	3	3	6	8	6	2	3	5	7	7	-	-	-							
								8 0 "	-	-	-	-	-	2 1/2	3	5 1/2	7	8	3	3	6	8	7	-	-	-							

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

Pitching, when ascertained.		Speed.			Whether			Whether		SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.				
					Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	Direction.			Force.	Weather.					Lee.	Weather.	Lee.						
Degrees.	K.	T.																								
1	2	5	No	No	Yes	S. D.	-	-	-	S. ½ E.	Easterly	4	Slight	-	-	E.S.E.	-	-	Yes	-	Yes	-	All	All	11.30. Shortened and furl- ed sails; commenced steaming. Royal yards were down for a short time; no perceptible roll whilst steaming head to wind. 6. Made all plain sail on starboard tack.	
1	2	5	"	"	"	"	-	-	-	S. by E.	E. by S.	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	"	"	"	"	-	-	-	S. by E. ½ E.	-	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	"	"	"	"	-	-	-	S. by E.	-	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	"	"	"	"	-	-	-	-	-	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	Yes	"	No	R.	-	-	-	E. by S.	-	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	8	"	"	"	"	-	-	-	E.	-	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	8	"	"	"	"	-	-	-	E.S. ½ S.	-	5	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	8	"	"	"	"	-	-	-	-	E. S. E.	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	8	"	"	"	"	-	-	-	-	-	-	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	No	"	Yes	S. D.	-	-	-	N.E.	"	5	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	"	"	"	"	-	-	-	"	"	5	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	3	0	No	No	Yes	S. D.	-	-	-	N.E. by N.	Easterly	2	Slight	-	-	E.S.E.	-	-	Yes	-	Yes	-	All	All	1.15. Furl'd sails, com- menced steaming; per- forming steam tactics during afternoon, royal yards down; no per- ceptible roll.	
1	2	0	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	Yes	"	No	R.	-	-	-	N.E.	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	E. N.E.	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	E. by S.	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	2	5	"	"	"	"	-	-	-	"	"	3	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	Yes	No	No	R.	-	-	-	E. ½ S.	E.	2	Slight	-	-	Ahead	-	-	Yes	-	Yes	-	All	All	Ship rolling very slightly, royal yards down.	
1	5	0	"	"	"	"	-	-	-	"	"	3	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	3	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	3	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	3	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	3	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	E. by S.	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	5	0	"	"	"	"	-	-	-	"	"	2	ditto	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	Yes	No	No	R.	-	-	-	E. by S.	E.N.E.	1 to 2	Very slight	-	-	Ahead	-	-	Yes	-	Yes	-	All	All	6.30. "Warrior" took ship in tow.	
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	E. ½ S.	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"	"	-	-	-	"	"	"	Slight	-	-	ditto	-	-	"	-	"	-	"	"		
1	6	0	"	"	"																					

“ ROYAL OAK.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “ Royal Oak ”—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.											
							Clinometer.					Pendulum.					Battens Instrument.			Clinometer.			Pendulum.			Battens Instrum.					
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.		
							Degrees.					Degrees.					Degrees.					Degrees of Heel (Mean).	Number of Heels per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.				
4 July	Days.	Mths.	Cwt. Tns.	Ft. in.	Ft. in.	H. M.	None on board.															None on board.									
						6 0 a.m.						3	3	6	10	9	2	3	5	9	9										
						7 0 "						4	5	9	14	10	3	5	8	14	9										
						8 0 "						2	2	4	6	9	3	2	5	8	9										
						9 0 "						3	4	7	11	9	3	3	6	9	9										
						10 0 "						4	3	7	12	9	3	3	6	9	9										
						11 0 "						3	3	6	9	9	3	3	6	9	9										
						12 0 noon						3	1	4	8	9	3	2	5	10	9										
						1 0 p.m.																									
						2 0 "																									
						3 0 "																									
						4 0 "																									
						5 0 "																									
						6 0 "																									
						7 0 "						2	1	2½	5	7	2	1	3	6	7										
					8 0 "																										
5 July						6 0 a.m.																									
						7 0 "																									
						8 0 "																									
						9 0 "																									
						10 0 "																									
						11 0 "																									
						12 0 noon																									
						1 0 p.m.																									
						2 0 "																									
						3 0 "																									
						4 0 "																									
						5 0 "																									
						6 0 "																									
						7 0 "																									
						8 0 "																									

JOURNAL of the QUALITIES of Her Majesty’s

Sailing.	Steaming.	Tacking.	Wearing.
The “ Royal Oak ” is well built and strong, and, in comparison with other ships of her class, weatherly; her inclination on a wind, fresh breeze, all plain sail, is 4.30, and, when full, carries her helm one turn to windward; when light, amidships. She steers off the wind very well, and her rate of speed on a wind from four to six knots, with force of wind four to five.	Comparative rate with other ships, 11 knots to 13 and 14. Engines are horizontal, double piston rod, in very good order, with the exception of expansion gear; they perform very well at sea. Average rate per hour, full steam, 11 knots; expansively (the most economical), five knots. Average rate run with one ton of coals, three knots; immersion of screw when deep, 4 ft. 5 in.; light, 1 ft. 10 in.; greatest number of revolutions, 62 when light, 61 when deep; horse-power, 800 (nominal).	Stays very well, and, under different circumstances of wind and sea, well and quickly, taking from 5 minutes 30 seconds to 6 minutes; but this has only been tried once, taking time, and with a moderate breeze, this cruise. In May, when cruising in the Channel, she stayed very well indeed under double and single reefed topsails, and on all other occasions.	Wears well; on account of having to wait on flagship to get into station, nothing else was obtained.

TRIALS OF THE CHANNEL FLEET IN 1868.

127

"ROYAL OAK."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.

Pitching and Performance at Sea of Her Majesty's Ship "Royal Oak"—continued.																						
Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Course.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "on Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.					
Degrees.	Degrees.																					
1	1	5	5	No	No	No	-	S. D.	-	Furled	-	-	-	-	-	-	-	-	-	-	-	Ship in tow of "Warrior."
1	1	5	5	"	"	"	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	5	5	"	"	"	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	5	0	"	"	"	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	5	8	"	"	"	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	5	8	"	"	"	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	6	5	"	"	"	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	3	3	"	"	Yes	-	"	-	ditto	-	-	-	-	-	-	-	-	-	-	-	
1	1	3	5	"	"	"	-	"	-	Tops and courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	5	"	"	"	-	"	-	Top, topgallant and courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	Tops and foresail	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	0	"	"	"	-	"	-	Top and courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	3	2	"	"	"	-	"	-	First royal, top, and courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	5	"	"	"	-	"	-	First royal, top, and courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-	-	-	-	-	-	-	-	-	-	
1	1	2	8	"	"	"	-	"	-	First royal, top, courses	-	-										

H. S. Hillyar, Captain.

Ship "ROYAL OAK."—Captain H. S. Hillyar, C.B.

Rolling.	Pitching.	Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.
Rolls very heavily indeed, though easily in a sea, both to leeward and windward, but in a strong breeze heels over from 20° to 40°, making 10 oscillations in a minute. See my letter of 4th July 1868.	Angle of pitching, $1\frac{1}{2}$ °; angle of scrading, $1\frac{1}{2}$ °; number of oscillations per minute, 11.	Vide my letter of 4th July 1868.	The distribution of weights is the same as in other ships of "Royal Oak's" class; no extra weights on board, nor is any weight shifted from its place.	Very Dry - -	Vide my letter of 4th July 1868.

H. S. Hillyar, Captain.

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship " PRINCE CONSORT." -

[illegible]

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "PRINCE CONSORT."

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.			Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.		
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
Degrees.																										
1	1	5	0	Yes	-	-	- Rev.	-	Nil	-	-	W. 1/2 S.	N.W. by W.	2-3	Moderate	-	Bow	-	-	Yes	-	Yes	-	All	All	Figures in Italics under Maximum Roll for "Clinometer," "Pendulum," and "Batten" denote Maximum Inclination during five minute observations.
1	1	5	4	"	-	-	"	-	Nil	-	-	W.	W.N.W.	1-2	ditto	-	ditto	-	-	"	-	"	-	"	"	
1	1	5	0	"	Yes	-	"	-	Nil	-	-	W.	W. by N.	1	ditto	-	ditto	-	-	"	-	"	-	"	"	
1	1	5	0	-	"	-	C. and R.	-	Fore and aft	-	-	"	N.W.	1	ditto	-	ditto	-	-	"	-	"	-	"	"	
1	1	5	0	-	"	-	-	-	ditto	-	-	"	"	1	ditto	-	ditto	-	-	"	-	"	-	"	"	
1	1	5	0	Yes	-	-	- R.	-	Nil	-	-	W.	N.W.	2	Moderate	-	Bow	-	-	Yes	-	Yes	-	"	"	
2	1	4	5	-	-	Yes	- C. not R.	-	Plain sail to topgallant sails	-	-	W. by N.	N.	4	ditto	-	Beam	-	-	Yes	-	Yes	-	All	All	2 to 5 p.m. "Steam Evolutions" not taken by "Prince Consort." Figures in Italics under Maximum Roll for "Clinometer," "Pendulum," and "Batten" denote Maximum Inclination for five minute observations. Whilst firing at target between observations from 10.10 to 11.15, ship rolled 14° port, 12° starboard, shipping a little water in weather ports; guns being fired out of ditto at the time 1/2 previous to taking 5' observations. At 1.50, ship rolled 12° port, 8° starboard.
2	1	3	5	-	-	"	"	-	ditto	-	-	"	N. by E.	3-4	ditto	-	Cross sea on bow and beam.	-	-	"	-	"	-	"	"	
2	1	4	0	-	-	"	"	-	ditto	-	-	"	"	3-4	ditto	-	ditto	-	-	"	-	"	-	"	"	
2	1	4	5	-	-	"	D. and R.	-	ditto	-	-	"	N.E. by N.	3-4	ditto	-	ditto	-	-	"	-	"	-	"	"	
2	1	4	2	-	-	"	"	-	1st reef topsails, foresail, head sails.	-	-	"	"	3-4	ditto	-	ditto	-	-	"	-	"	-	"	"	
2	1	4	0	-	-	"	"	-	1st reef fore and main topsails, foresail, fore top staysail.	-	-	"	"	3-4	ditto	-	Cross sea on beam	-	-	"	-	"	-	"	"	
2	1	4	0	-	-	"	"	-	ditto	-	-	"	"	3-4	ditto	-	Cross sea abaft beam	-	-	"	-	"	-	"	"	
2	1	4	0	-	-	"	D. not R.	-	1st reef and courses, fore main topgallant sails.	-	-	W. by N.	N.E.	3-4	Moderate	-	ditto	-	-	Yes	-	Yes	-	All	All	
2	1	4	0	-	-	"	D. and R.	-	ditto	-	-	"	"	3	ditto	-	Abaft beam	-	-	"	-	"	-	"	"	
2	1	2	5	-	-	"	D. not Rev.	-	Plain, except royals and mainsail.	-	-	N.	N.E. by E.	3	ditto	-	On bow	-	-	"	-	"	-	"	"	
2	1	3	0	-	-	"	"	-	Topsails, topgallant sails on cap.	-	-	N.N.W.	E.	3	M. Long	-	Quarter	-	-	"	-	"	-	Nil	Nil	
2	1	1	5	-	-	"	"	-	Topsails, topgallant sails, and head sails.	-	-	W. by N.	E.N.E.	2-3	ditto	-	Abaft beam	-	-	"	-	Square	-	All	"	
2	1	1	5	-	-	"	"	-	Topsails, head sails	-	-	"	"	2-3	ditto	-	ditto	-	-	"	-	"	-	"	All	
2	1	2	0	-	-	"	"	-	Topsails and foresail	-	-	"	E.	2-3	Moderate	-	Quarter	-	-	"	-	"	-	"	"	
2	1	2																								

REPORT, &c. RELATIVE TO

“ PRINCE CONSORT.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “ Prince Consort ”—*continued.*

[illegible]

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.			
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e. whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
-	-	1	0	-	-	-	Yes	C. not R.	Whilst shortening sail	-	N.W. by N.	N.E.	1	Moderate; short	Bow	-	-	Topgallant yards.	-	Square	-	All	All	All	Not taken during "steam evolutions."		
-	-	-	-	-	-	-	"	"	Topsails, head sails	-	Head; N.E. by N.	Calm	0	Moderate	-	-	ditto	-	"	-	"	"	"	"			
-	-	-	-	-	-	-	"	"	ditto	-	"	"	0	ditto	-	-	ditto	-	Yes	-	"	"	"	"			
-	-	-	-	-	-	-	Yes	C. not R.	Topsails, head sails	-	N.E. by E.	Calm	0	Moderate	-	-	Beam	-	Yes	-	Yes	-	All	All	All	Not taken during "evolutions."	
-	-	-	-	-	-	-	Yes	C. not R.	Plain, except mainsail and spanker.	-	N.E. by N.	Calm	0	Moderate; long	Bow	-	-	Yes	-	Yes	-	All	All	All	All.		
15	1	0	5	-	-	-	"	"	Plain, except courses	-	N. by W.	W. by N.	1	ditto	-	-	ditto	-	"	-	Square	-	"	"	"		"
-	-	0	5	-	-	-	"	"	ditto	-	North	"	1	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	-	"	"	Topsails, spanker, head sails.	-	N. ¼ W.	S.W.	1-2	ditto	-	-	Beam	-	"	-	Yes	-	"	"	"	"	
-	-	0	5	-	-	-	"	"	ditto	-	North	"	1-2	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	-	Yes	C. not R.	Topsails, head sails	-	West	Calm	0	Moderate; long	2 points before beam.	-	Yes	-	Yes	-	All	All	All	All.			
-	-	-	-	-	-	-	"	"	ditto	-	Head; North.	Light air from W.S.W.	0-1	ditto	-	-	2 points on bow	-	"	-	Head; yes; after square.	-	"	"	"	"	
15	1	Sternway	-	-	-	-	"	"	Topsails, foresail, head sails.	-	N.N.W.	"	1	ditto	-	-	1 point on bow	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	-	"	"	Plain, except mainsail	-	N. by E.	"	1	ditto	-	-	4 points on bow	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	-	"	"	Plain sail	-	N.E. by E.	"	1	ditto	-	-	2 points abaft beam.	-	"	-	Square	-	"	"	"	"	
-	-	0	5	-	-	-	"	"	Ditto, starboard, topgal- lant studsails.	-	E.S.E.	"	1	ditto	-	-	Quarter	-	"	-	"	-	"	"	"	Clinometer not register- ing.	
-	-	0	8	-	-	-	"	"	ditto	-	S.E. by E.	"	1	ditto	-	-	Aft	-	"	-	"	-	"	"	"		"
-	-	0	4	-	-	-	"	"	Nil	-	"	"	1	ditto	-	-	ditto	-	"	-	"	-	"	"	"		"
-	-	-	-	-	-	-	"	"	Nil	-	South	"	1	ditto	-	-	Quarter	-	"	-	"	-	"	"	"	"	
-	-	4	0	Yes	-	-	-	C. R.	Nil	-	"	"	1	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
-	-	5	0	"	-	-	-	"	Nil	-	N.W.	N.W.	1	ditto	-	-	Bow	-	"	-	"	-	"	"	"	"	
-	-	5	5	"	-	-	-	"	Nil	-	S.W. by W.	N.E.	1	ditto	-	-	Beam	-	"	-	"	-	"	"	"	"	
-	-	1	0	-	-	-	Yes	C. not R.	Making sail	-	W.S.W.	E.S.E.	1	ditto	-	-	ditto	-	"	-	"	-	"	"	"	Evolutions.	
-	-	0	5	-	-	-	"	"	Plain sail, except main- sail.	-	S.W. ¼ W.	E.N.E.	1	ditto	-	-	ditto	-	"	-	"	-	"	"	"		"
-	-	1	2	-	-	-	"	"	ditto	-	S.W. by W.	"	1	ditto	-	-	ditto	-	"	-	"	-	"	"	"		"
1	½	1	5	-	-	-	"	"	ditto	-	W. by S. ¼ S.	"	2	ditto	-	-	Quarter	-	"	-	"	-	"	"	"	"	
15	1	4	0	-	-	-	Yes	C. not R.	Plain sail, except main- sail.	-	W. by N. ¼ N.	E.N.E.	3-4	Moderate; long	Quarter	-	-	Yes	-	Square	-	All	All	All	All.		
15	1	3	5	-	-	-	"	"	ditto	-	W. by N.	"	4	ditto	-	-	ditto	-	"	-	Yes	-	"	"	"	"	
15	1	3	5	-	-	-	"	"	ditto	-	West	"	4	ditto	-	-	Astern	-	"	-	"	-	"	"	"	"	
15	1	2	8	-	-	-	"	"	Topsails on cap, jib	-	W. by S. ½ S.	"	4	Moderate; short	ditto	-	-	"	-	Square	-	"	"	"	"	"	
-	-	4	5	-	-	-	"	"	Plain starboard sails, and topgallant stud sails.	-	N.W. ¼ W.	"	4-5	ditto	-	-	Aft	-	"	-	"	-	"	"	"	"	
20	1	3	8	Yes	-	-	-	C. R.	Nil	-	West	"	4	ditto	-	-	ditto	-	No	-	Yes	-	"	"	"	"	
51	3	3	8	"	-	-	-	"	Nil	-	N.W. ¼ W.	"	4	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
12	5	2	0	-	-	-	Yes	C. not R.	Topsails, foresail, maintop- gallant sail.	-	N.W. ½ N.	"	3-4	ditto	-	-	ditto	-	Yes	-	Square	-	"	"	"	"	
12	5	3	0	-	-	-	"	"	ditto	-	"	"	3	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
12	5	4	0	-	-	-	"	"	Plain sail	-	N.W. ¼ W.	"	3	ditto	-	-	ditto	-	"	-	Yes	-	"	"	"	"	
-	-	4	8	-	-	-	"	"	ditto	-	N.W. ¼ N.	"	3-4	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
-	-	4	5	-	-	-	"	"	ditto	-	N.W.	East	4	ditto	-	-	Quarter	-	"	-	"	-	"	"	"	"	
1	7	2	5	-	-	-	"	"	Plain sail, starboard top main studsail.	-	"	"	4	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
1	7	4	4	-	-	-	"	"	2nd reef topsails, topgal- lant sails, courses.	-	"	"	4	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
1	7	4	0	-	-	-	"	"	2nd reef topsails, topgal- lant sails.	-	"	"	4-5	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	
1	5	4	0	-	-	-	"	"	Ditto foresail, topgallant sails, lee clew mainsail.	-	"	"	5	ditto	-	-	ditto	-	"	-	"	-	"	"	"	"	

“PRINCE CONSORT.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Prince Consort”—*continued.*

DATE	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.																	When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
							Clinometer.					Pendulum.					Battens.					Clinometer.			Pendulum.			Battens.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
																															Degrees.					Degrees.					Degrees.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
18 June -	Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

Pitching when ascertained.		Speed.		Whether			Whether with		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.					Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees.																								
1°	5	2	2	-	-	Yes	C. not R.	Second reef topsails, courses.	N.W.	E.N.E.	2	Moderate; short	Quarter	-	-	-	Yes	-	Yes	-	All	All	Clinometer not registering.	
1°	5	2	0	-	-	"	- ditto -	Ditto, foresail	"	"	1.2	Moderate	-	-	ditto	-	-	"	-	"	"	"		
1.3	1.3	1	8	-	-	"	- ditto -	Topsails, foresail	"	"	1.2	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		1	5	-	-	"	- ditto -	Ditto, courses	"	N.E. by E.	1.2	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		1	5	-	-	"	- ditto -	Plain, starboard, topgallant studsails.	N.W. by N. ¼ N.	E.N.E.	2	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		1	5	-	-	"	- ditto -	- ditto -	N.W. by N. ¼ N.	"	1.2	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		1	8	-	-	"	- ditto -	Plain, except main sail	N.W.	"	2	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		1	0	-	-	"	- ditto -	Plain sail	"	"	2	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		0	5	-	-	"	- ditto -	- ditto -	N.W. ½ N.	N.E.	1	- ditto -	-	-	Aft	-	-	"	-	"	"	"		
		0	5	-	-	"	- ditto -	- ditto -	N.W.	"	1	- ditto -	-	-	Aft	-	-	"	-	"	"	"		
		0	5	-	-	"	- ditto -	Ditto, except courses	Head	Calm	0	- ditto -	-	-	Quarter	-	-	"	-	Square	-	"		
		0	0	-	-	"	- ditto -	- ditto -	W. by N. ½ N.	"	0	- ditto -	-	-	Beam	-	-	"	-	Main yard square, fore and clew yards braced up.	"	"		
		0	0	-	-	"	- ditto -	- ditto -	N. by E. ½ E.	"	0	- ditto -	-	-	Beam	-	-	"	-	"	"	"		
		0	0	-	-	"	- ditto -	- ditto -	N.E. by N.	"	0	- ditto -	-	-	ditto	-	-	"	-	Square	-	"		
		0	0	-	-	"	- ditto -	Topsails, topgallant sails	N. E. by E. ½ E.	"	0	- ditto -	-	-	Two points before beam.	-	-	"	-	"	"	"		
		0	5	-	-	"	- ditto -	- ditto -	N.E. by N.	"	0	- ditto -	-	-	Beam	-	-	"	-	"	"	"		
		0	5	-	-	"	- ditto -	- ditto -	N. by E. ½ E.	"	0	- ditto -	-	-	ditto	-	-	"	-	"	"	"		
		0	8	-	-	Yes	C. not R.	Plain, except main sail	E.N.E.	Calm	0	Moderate	-	-	Two points before beam.	-	Yes	-	Square	-	All	All	Steam evolutions. W. H. B.	
		0	8	-	-	"	- ditto -	- ditto -	E. ½ N.	N.W.	1	- ditto -	-	-	Two points on bow	-	"	-	"	-	"	"		"
		0	5	-	-	"	- ditto -	Plain sail	S.W.	"	1	- ditto -	-	-	Beam	-	-	"	-	Yes	-	"		
		0	5	-	-	"	- ditto -	- ditto -	S.W. by W.	"	1	- ditto -	-	-	ditto	-	-	"	-	"	-	"		
		1	0	-	-	"	- ditto -	- ditto -	N.	W. by N.	1	- ditto -	-	-	Bow	-	-	"	-	"	-	"		
		0	5	-	-	"	- ditto -	- ditto -	S.W. by W.	W.	1	- ditto -	-	-	Beam	-	-	"	-	Tacking	-	"		
		1	0	-	-	"	- ditto -	Ditto, topmast, topgallant studsails.	N. by E. ½ E.	"	1	- ditto -	-	-	Bow	-	-	"	-	Yes	-	"		
		1	0	-	-	"	- ditto -	Nil	N. by W.	W.N.W.	1	- ditto -	-	-	Bow	-	-	"	-	Square	-	"		
		0	0	-	-	"	- ditto -	Nil	N. ¼ W.	W.	2	- ditto -	-	-	Beam	-	-	"	-	"	-	"		
	stopped.	Yes		-	-	"	C. R.	Nil	N.E. by E. ¼ E.	"	1	- ditto -	-	-	Bow	-	-	"	-	"	-	"		
		5	0	-	-	"	- ditto -	Nil	N.E. by E. ¼ E.	"	1	- ditto -	-	-	Quarter	-	-	"	-	"	-	"		
		4	0	-	-	"	- ditto -	Nil	E.N.E.	"	1	- ditto -	-	-	- ditto -	-	-	"	-	"	-	"		
		3	0	-	-	"	- ditto -	Nil	S. by E. ½ E.	"	2	- ditto -	-	-	- ditto -	-	-	"	-	"	-	"		
		2	0	-	-	Yes	- ditto -	First reef topsails, foresail	S.W. ¾ S.	"	3	- ditto -	-	-	Beam	-	-	"	-	Yes	-	"		
		1	0	-	-	"	- ditto -	First reef topsails	S.W. ½ S.	"	3	- ditto -	-	-	Bow	-	-	"	-	"	-	"		
		1	0	-	-	"	- ditto -	Plain, except royals	S.W. by S. ¼ S.	W. by S.	2.3	- ditto -	-	-	Beam	-	-	"	-	"	-	"		
		2	0	-	-	Yes	C. not R.	First reef topsails, jib	W. by S. ¼ S.	N.W.	4.5	Moderate	-	-	Two points before beam.	-	Yes	-	Yes	-	All	All	Clinometer not registering.	
		2	0	-	-	"	- ditto -	First reef topsails, foresail, head sails.	"	"	4.5	- ditto -	-	-	- ditto -	-	-	"	-	"	-	"		
		1	5	-	-	"	- ditto -	- ditto -	W. ½ S.	"	4	- ditto -	-	-	- ditto -	-	-	"	-	"	-	"		
		2	0	-	-	"	- ditto -	First reef topsails, courses, main topgallant sail.	"	"	3.4	- ditto -	-	-	- ditto -	-	-	"	-	"	-	"		
		1	8	-	-	"	- ditto -	First reef topsails, head sails	W.S.W.	W.N.W.	3.4	Moderate; short	Beam	-	-	ditto	-	-	"	-	"	-		"
		2	0	-	-	"	- ditto -	- ditto -	S.W. by W. ½ W.	N.W.	3.4	- ditto -	-	-	ditto	-	-	"	-	"	-	"		
		1	5	-	-	"	D. not R.	- ditto -	W. by S.	"	3.4	- ditto -	-	-	ditto	-	-	"	-	"	-	"		
		2	5	-	-	"	- ditto -	Plain	"	"	3	- ditto -	-	-	ditto	-	-	"	-	"	-	"		
		2	0	-	-	"	- ditto -	ditto	W.S.W.	N.W. by W.	2.3	- ditto -	-	-	ditto	-	-	"	-	"	-	"		
		2	0	-	-	"	- ditto -	ditto	N. by E.	N.W.	3	- ditto -	-	-	Two points before beam.	-	-	"	-	"	-	"		
		2	5	-	-	"	- ditto -	Plain, except main sail and royals.	N. by E. ½ E.	"	2.3	- ditto -	-	-	Bow	-	-	"	-	"	-	"		
		2	0	-	-	"	- ditto -	- ditto -	N.E. by N.	"	2.3	- ditto -	-	-	Beam	-	-	"	-	Main yard square.	-	"		
		1	0	-	-	"	- ditto -	Topsails, topgallant sails, spanker.	N.N.E.	N.W. by N.	3	- ditto -	-	-	Bow	-	-	"	-	"	-	"		
		1	0	-	-	"	- ditto -	Topsails, topgallant sails, foresail.	N.E. ¼ N.	N.W.	2.3	Chopping sea	Beam	-	-	-	-	"	-	Yes	-	"		
		1	0	-	-	"	- ditto -	First reef topsail, foresail	N.N.E.	"	2.3	Moderate; short	ditto	-	-	-	-	"	-	"	-	"		
		1	0	-	-	"	- ditto -	Ditto, courses, fore trysail, head sails.	N.E. by N.	"	2	- ditto -	-	-	ditto	-	-	"	-	"	-	"		

Steam evolutions.
W. H. B.

Clinometer not registering.

Chasing to windward.
W. H. B.

REPORT, &c., RELATIVE TO

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—*continued.*

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.		Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.								
								Clinometer.					Pendulum.					Battens.					Clinometer.			Pendulum.			Battens.		
	Provisions.	Stores.	Coals.	Forward.	Aft.			Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.
	Days.	Mths.	Tons.	Ft. in.	Ft. in.	H.	M.																								
21 June	29	4	283	23 6	26 6	5	0 a.m.	-	-	-	-	-	4.0	2.8	6.8	13.5	12	2.2	1.9	4.1	6.5	12.	-	-	-	-	-	-	-	-	-
	29	4	283	23 6	26 6	6	0 "	-	-	-	-	-	3.4	2.4	5.8	15.	12	1.7	1.8	3.5	7.	12.	-	-	-	-	-	-	-	-	
	29	4	283	23 6	26 6	7	0 "	-	-	-	-	-	4.0	2.8	6.8	13.	13	2.2	1.7	3.9	7.5	13.	-	-	-	-	-	-	-	-	
	29	4	283	23 6	26 6	8	0 "	-	-	-	-	-	4.3	2.0	6.3	15.	13	2.4	1.3	3.7	8.	12.	-	-	-	-	-	-	-	-	
	29	4	283	23 6	26 6	9	0 "	-	-	-	-	-	4.1	2.5	6.6	12.5	14	2.0	1.2	3.2	7.	14.	-	-	-	-	-	-	-	-	
	29	4	283	23 6	26 6	10	0 "	-	-	-	-	-	-	-	-	-	-	2.0	1.0	3.0	5.	12.8	-	-	-	-	-	-	-	-	-
	29	4	283	23 6	26 6	11	0 "	-	-	-	-	-	4.5	2.0	6.5	13.	13	2.6	1.0	3.6	7.	13.	-	-	-	-	-	-	-	-	
	29	4	283	23 6	26 6	12	0 "	-	-	-	-	-	3.7	2.4	6.1	13.	12	-	-	-	-	-	-	-	-	-	-	-	-	-	
	29	4	283	23 6	26 6	1	0 p.m.	-	-	-	-	-	2.0	2.7	4.7	9.5	14	2.0	.5	2.5	6.5	14.	-	-	-	-	-	-	-	-	-
	29	4	283	23 6	26 6	2	0 "	-	-	-	-	-	3.0	1.1	4.1	9.0	12	2.0	.7	2.7	6.5	11.	-	-	-	-	-	-	-	-	-
	29	4	283	23 6	26 6	3	0 "	-	-	-	-	-	3.1	1.0	4.1	9.0	13	2.0	.5	2.5	4.5	13.	-	-	-	-	-	-	-	-	-
	29	4	283	23 6	26 6	4	0 "	-	-	-	-	-	2.6	.6	3.2	5.5	12	1.8	.3	2.1	4.	13.	-	-	-	-	-	-	-	-	-
29	4	283	23 6	26 6	5	0 "	-	-	-	-	-	2.6	.6	3.2	6.0	12	1.8	.3	2.1	4.5	12.	-	-	-	-	-	-	-	-	-	
29	4	283	23 6	26 6	6	0 "	-	-	-	-	-	2.7	1.6	4.3	10.5	12	2.0	.8	2.8	5.	13.	-	-	-	-	-	-	-	-	-	
22 June	29	4	283	23 6	26 6	7	0 "	-	-	-	-	-	2.7	1.1	3.8	9.5	13	1.6	.7	2.3	7.	12.	-	-	-	-	-	-	-	-	-
	29	4	283	23 6	26 6	8	0 "	-	-	-	-	-	3.0	1.6	4.6	9.5	12	1.6	1.0	2.6	5.5	12.	-	-	-	-	-	-	-	-	-
	28	4	272	23 6	26 6	5	0 a.m.	-	-	-	-	-	-	-	-	-	-	2.7	1.9	4.6	7.5	12.	-	-	-	-	-	-	-	-	-
	28	4	272	23 6	26 6	6	0 "	-	-	-	-	-	4.2	4.0	6.2	14.5	12	2.7	2.0	4.7	12.	12.	-	-	-	-	-	-	-	-	
	28	4	272	23 6	26 6	7	0 "	-	-	-	-	-	3.4	2.0	5.4	12.5	13	2.3	1.7	4.0	8.	12.	-	-	-	-	-	-	-	-	
	28	4	272	23 6	26 6	8	0 "	-	-	-	-	-	3.7	1.6	5.3	9.5	13	2.7	1.5	4.2	10.	13.	-	-	-	-	-	-	-	-	
	28	4	272	23 6	26 6	9	0 "	-	-	-	-	-	3.7	2.3	6.0	19.	13	2.7	2.0	4.7	13.	12.	-	-	-	-	-	-	-	-	
	28	4	272	23 6	26 6	10	0 "	-	-	-	-	-	4.1	2.9	7.0	14.	12	3.3	2.3	5.6	9.	12.	-	-	-	-	-	-	-	-	-
	28	4	272	23 6	26 6	11	15 "	-	-	-	-	-	5.7	3.6	9.3	18.	10	3.9	2.8	6.7	16.	12.	-	-	-	-	-	-	-	-	-
	28	4	272	23 6	26 6	12	0 "	-	-	-	-	-	-	-	-	-	-	2.9	2.0	4.9	10.	12.	-	-	-	-	-	-	-	-	-
	28	4	272	23 6	26 6	1	0 p.m.	-	-	-	-	-	6.3	4.7	11.0	22.	12	5.0	4.0	9.0	16.	12.	-	-	-	-	-	-	-	-	-
	28	4	272	23 6	26 6	3	0 "	-	-	-	-	-	3.8	3.8	7.6	12.5	13	3.3	3.0	6.3	9.	12.	-	-	-	-	-	-	-	-	-
28	4	272	23 6	26 6	4	0 "	-	-	-	-	-	3.2	2.7	5.9	11.	13	2.5	2.1	4.6	8.5	12.	-	-	-	-	-	-	-	-	-	
28	4	272	23 6	26 6	5	0 "	-	-	-	-	-	5.2	4.8	10.0	15.	12	3.5	5.0	8.5	14.5	12.	-	-	-	-	-	-	-	-	-	
28	4	272	23 6	26 6	6	0 "	-	-	-	-	-	4.5	5.1	9.6	16.	12	3.0	4.4	7.4	15.5	12.	-	-	-	-	-	-	-	-	-	
28	4	272	23 6	26 6	7	0 "	-	-	-	-	-	4.3	5.2	9.5	19.5	14	3.0	5.0	8.0	17.5	14.	-	-	-	-	-	-	-	-	-	
28	4	272	23 6	26 6	8	0 "	-	-	-	-	-	3.5	5.0	8.5	13.	12	2.4	4.9	7.3	10.5	12.	-	-	-	-	-	-	-	-	-	
23 June	27	4	270	23 6	26 6	5	0 a.m.	-	-	-	-	-	3.8	4.7	8.5	13.	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	6	0 "	-	-	-	-	-	2.2	5.1	7.3	16.	12	1.3	5.0	6.3	12.5	12.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	7	0 "	-	-	-	-	-	1.1	5.1	6.2	15.	12	0.8	3.9	4.7	10.5	12.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	8	0 "	-	-	-	-	-	1.7	5.3	7.0	12.5	13	-	-	-	-	-	-	-	-	-	-	-	-	-	
	27	4	270	23 6	26 6	9	0 "	-	-	-	-	-	1.8	5.8	7.6	17.5	13	.6	5.0	5.6	12.	12.	-	-	-	-	-	4.1	12	7	
	27	4	270	23 6	26 6	10	0 "	-	-	-	-	-	1.7	5.2	6.9	14.	13	.4	4.3	4.7	9.5	12.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	11	0 "	-	-	-	-	-	2.8	6.0	8.8	13.5	12	1.2	5.7	6.9	10.	12.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	12	0 "	-	-	-	-	-	-	-	-	-	-	1.0	6.1	7.1	12.5	12.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	1	0 p. m.	-	-	-	-	-	1.1	4.6	5.7	13.5	12	1.8	5.6	7.4	19.	14.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	2	0 "	-	-	-	-	-	4.0	6.5	10.5	20.	12	1.9	2.3	4.2	14.	12.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	3	0 "	-	-	-	-	-	2.5	5.3	7.8	12.	14	.9	4.3	5.2	9.5	14.	-	-	-	-	-	-	-	-	-
	27	4	270	23 6	26 6	4	0 "	-	-	-	-	-	2.2	6.0	8.2	17.	13	.8	5.5	6.3	9.0	14.	-	-	-	-	-	-	-	-	-
27	4	270	23 6	26 6	5	0 "	-	-	-	-	-	2.7	4.3	7.0	17.5	13	1.6	4.2	5.8	15.	12.	-	-	-	-	-	-	-	-	-	
27	4	270	23 6	26 6	6	0 "	-	-	-	-	-	5.4	2.4	7.8	21.5	13	3.6	1.7	5.3	14.	12.	-	-	-	-	-	-	-	-	-	
27	4	270	23 6	26 6	7	0 "	-	-	-	-	-	6.1	3.3	9.4	14.	12	4.0	2.0	6.0	10.5	12.5	-	-	-	-	-	-	-	-	-	
27	4	270	23 6	26 6	8	0 "	-	-	-	-	-	4.3	2.2	6.5	17.	13	3.4	1.9	5.3	11.5	12.	-	-	-	-	-	-	-	-	-	

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

Pitching, when ascertained.	Speed.		Whether Under Steam only.		Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
	Forward.	Aft.	Under Steam only.	Under Steam and Sail.	Under Sail only.			Direction.	Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
Degrees.	K.	T.																
0	5	-	-	-	Yes	D. not R.	Double-reefed topsails, gaff, head sails.	N.E. $\frac{1}{2}$ E.	N.N.W.	3'	Cross chopping sea.	Beam - - -	Yes - -	Yes - -	All	All	All	All.
0	5	-	-	-	"	ditto	ditto	N.E. by E.	"	1-2	ditto	Two points abaft beam	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	Topsails, gaff, head sails -	N.E. by N.	N.W. by N.	1-2	ditto	Beam - - -	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	Plain	N.E.	N.N.W.	1-2	ditto	One point abaft beam	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	ditto	N.N.E.	N.W.	1-2	Moderate, short	One point before beam	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	ditto	"	"	2'	ditto	ditto	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	ditto	N.E. by N. $\frac{1}{2}$ N.	"	2'	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	ditto	"	"	1-2	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	ditto	W. by S. $\frac{3}{4}$ S.	"	2-3	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	ditto	N.E. $\frac{1}{2}$ N.	N.N.W.	2'	ditto	ditto	" - -	" - -	"	"	"	"
3	0	-	-	-	"	ditto	ditto	N.E. $\frac{1}{2}$ N.	"	3'	Moderate cross sea	Beam - - -	" - -	" - -	"	"	"	"
2	5	-	-	-	"	ditto	ditto	"	"	3'	ditto	ditto	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	ditto	"	"	3'	ditto	ditto	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	Second-reef topsails, courses, fore, main, top- gallant sails, fore and aft sails.	N.E. $\frac{1}{2}$ E.	"	2-3	ditto	ditto	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	ditto	"	"	2'	ditto	ditto	" - -	" - -	"	"	"	"
1	5	-	-	-	"	ditto	ditto	N.E. by E.	N. by W.	2'	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	Yes	C. not R.	Topsails, topgallant sails, head sails.	N.E.	N.N.W.	2'	Moderate cross sea	Quarter - - -	Yes - -	Yes - -	All	All	All	All
1	2	-	-	-	"	ditto	Plain	"	"	1-2	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	ditto	"	"	1-2	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	ditto	E. $\frac{1}{2}$ N.	"	2'	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	Nil	Head N.E.	"	1-2	ditto	ditto	" - -	" - -	"	"	"	"
2	0	-	-	-	"	ditto	Nil	$\frac{3}{4}$ E.	"	"	"	"	" - -	" - -	"	"	"	"
2	0	-	-	-	"	ditto	Nil	N.E. by E.	"	1'	ditto	Two points abaft beam	" - -	" - -	"	"	"	"
3	5	-	-	-	"	ditto	Nil	$\frac{1}{2}$ E.	"	1'	Moderate	Beam - - -	" - -	" - -	"	"	"	"
4	0	-	-	-	"	ditto	Nil	N.N.E.	"	1'	ditto	ditto	" - -	" - -	"	"	"	"
4	5	-	-	-	"	ditto	Nil	N.E. by N.	"	1'	ditto	Two points before beam	" - -	" - -	"	"	"	"
1	5	-	-	-	Yes	C. not R.	Plain	S.W. by S.	W.	1-2	ditto	Beam - - -	" - -	Yes - -	"	"	"	"
1	0	-	-	-	"	ditto	Topsails, topgallant sails -	"	"	2'	ditto	ditto	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	ditto	"	"	2'	ditto	Cross, on bow	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	Second reef topsails, top- gallant sails, fore sails.	S.S.W.	"	2-3	ditto	Beam - - -	" - -	" - -	"	"	"	"
1	0	-	-	-	"	ditto	Second reef topsails, courses	S. by W.	W. by S.	3-4	ditto	ditto	Topgallant yards	" - -	" - -	"	"	"
1	0	-	-	-	"	ditto	Ditto, and fore and aft sail	"	"	3-4	ditto	ditto	" - -	" - -	"	"	"	"
2	5	-	-	-	Yes	C. not R.	Second reef topsails, head sails.	W.S.W.	N. Westerly	5-6	Confused short sea	Bow - - -	Topgallant yards	Yes - -	Nine	All	All	All
2	5	-	-	-	"	ditto	Ditto, foresail, gaff, main sail, head sail.	"	N.W.	5-6	ditto	ditto	" - -	" - -	"	"	"	"
3	0	-	-	-	"	ditto	Ditto, courses, main top- gallant sail, head sail.	"	"	6'	ditto	ditto	" - -	" - -	"	"	"	"
4	0	-	-	-	"	ditto	ditto	"	"	5-6	ditto	ditto	" - -	" - -	"	"	"	"
3	8	-	-	-	"	ditto	Second reef topsail, courses, head, gaff sails	S.W. by W.	N.W. by W.	5-6	ditto	ditto	" - -	" - -	"	"	"	"
2	8	-	-	-	"	ditto	ditto	W.S.W.	N. Westerly	5-6	ditto	ditto	" - -	" - -	"	"	"	"
2	8	-	-	-	"	ditto	ditto	"	"	5-6	ditto	ditto	" - -	" - -	"	"	"	"
4	2	-	-	-	"	ditto	Ditto, and courses	"	"	4-5	ditto	ditto	" - -	" - -	"	"	"	"
4	0	-	-	-	"	ditto	Second reef topsails, fore, main, topgallant sails, courses, fore and aft sail.	"	"	4-5	ditto	ditto	" - -	" - -	"	"	"	"
2	5	-	-	-	"	ditto	Second reef topsail, fore- sail, head sails.	"	"	4-5	ditto	ditto	" - -	" - -	"	"	"	"
2	5	-	-	-	"	ditto	Second reef topsails, courses, head sails.	S.W. by W.	N.W. by W.	4-5	ditto	ditto	" - -	" - -	"	"	"	"
2	5	-	-	-	"	ditto	Second reef topsails, courses, fore and main topgallant sails.	W.S.W.	"	5'	ditto	ditto	" - -	" - -	"	"	"	"
2	5	-	-	-	"	ditto	Second reef topsails, gaff and head sails.	W. by S.	"	5'	ditto	ditto	" - -	" - -	"	"	"	"
2	0	-	-	-	"	ditto	ditto	N.N.E.	"	4-5	ditto	One point before beam	" - -	" - -	"	"	"	"
3	0	-	-	-	"	ditto	Ditto, and fore and main topgallant sails.	N. by E. $\frac{1}{2}$ E.	N.W.	3-4	ditto	ditto	" - -	" - -	Twelve	"	"	"
2	0	-	-	-	"	ditto	ditto	"	"	3'	ditto	ditto	" - -	" - -	All	"	"	"

REPORT, &c. RELATIVE TO

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

DATE.	On Board.					Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.									
									Clinometer.					Pendulum.					Battens.					Clinometer.			Pendulum.			Battens.			
	Provisions.	Stores.	Coals.	Forward.	Aft.	Starboard.	Port.		TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.			
																															Degrees.	Degrees.	Degrees.
24 June - -	Days.	Mths.	Tons.	Ft. in.	Ft. in.	H.	M.																										
	26	4	264	26 3	26 6	5	0 a.m.	-	-	-	-	-	-	-	3·5	1·7	5·2	9·5	13	2·2	0·9	3·1	6·5	13	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	6	0 "	-	-	-	-	-	-	-	3·0	1·2	4·2	8·5	14	1·8	0·6	2·4	4·5	13	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	7	0 "	-	-	-	-	-	-	-	3·0	"	3·8	7·	14	2·0	0·5	2·5	4·	13	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	8	0 "	-	-	-	-	-	-	-	2·7	2·5	5·2	13·	13	2·4	2·0	4·4	10·	12	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	10	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	26	4	264	26 3	26 6	11	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	12	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	1	0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	2	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	3	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	4	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	5	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	26	4	264	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	25 June - -	25	4	262	26 3	26 6	5	0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25		4	262	26 3	26 6	6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	9	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	10	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	11	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
25		4	262	26 3	26 6	12	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	1	0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	2	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	3	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	4	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	5	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25		4	262	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26 June - -		24	4	260	26 3	26 6	5	0 a.m.	-	-	-	-	-	-	-	3·2	·9	4·1	8·	11	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	6	0 "	-	-	-	-	-	-	-	3·2	1·2	4·4	7·5	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	7	0 "	-	-	-	-	-	-	-	3·2	·9	4·1	7·5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	8	0 "	-	-	-	-	-	-	-	2·8	·4	3·2	8·	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	9	0 "	-	-	-	-	-	-	-	2·8	1·1	3·9	6·5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	10	0 "	-	-	-	-	-	-	-	2·4	·5	2·9	4·	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	11	0 "	-	-	-	-	-	-	-	1·5	3·1	4·6	10·	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	12	0 "	-	-	-	-	-	-	-	2·6	1·0	3·6	4·5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	1	0 p.m.	-	-	-	-	-	-	-	2·2	·1	2·3	5·0	12	1·6	·9	2·5	4·5	10	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	2	0 "	-	-	-	-	-	-	-	2·6	·9	3·5	5·5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	3	0 "	-	-	-	-	-	-	-	-	-	-	-	-	3·7	2·8	6·5	11·	12	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	4	0 "	-	-	-	-	-	-	-	2·4	1·0	3·4	7·5	12	2·2	0·7	2·9	6·5	12	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	5	0 "	-	-	-	-	-	-	-	4·0	3·0	7·0	14·5	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	6	0 "	-	-	-	-	-	-	-	4·4	2·8	7·2	10·	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	7	0 "	-	-	-	-	-	-	-	3·3	1·6	4·9	8·	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	24	4	260	26 3	26 6	8	0 "	-	-	-	-	-	-	-	4·1	3·0	7·1	11·	12	4·5	3·0	7·5	11·5	12	-	-	-	-	-	-	-	-	-

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort."—continued.

Pitching, when ascertained.			Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.			SAIL SET.			Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
Forward.			Aft.			Under Steam only.			Under Steam and Sail.			Under Sail only.			Direction.			Force.		Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.		Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.		If Upper are Aloft.		If Yards are Braced up.		Weather.		Lee.		
Degrees.	K.	T.																														
	2	0	-	-	Yes	C. not R.	Second reef topsails, courses, gaff and head sails.	N. by E.	N.W. by W.	2.3	Moderate; short	Bow - - -	Topgallant yards.	- Yes -	All	All	All	All	Clinometer not regis- tering.													
	1	8	-	-	"	"	ditto - - -	"	"	2.3	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	5	-	-	"	"	Plain, except royals, spanker.	"	"	2.3	ditto - - -	ditto - - -	"	"	"	"	"	"														
	2	0	-	-	-	"	Furling sails - - -	"	"	2.3	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	Yes	-	-	C.R.	Nil - - -	S.W. by S.	"	2'	ditto - - -	One point before beam.	"	Square -	"	"	"	"	Five minute observa- tions not taken; ship steaming round tar- get; mean roll during practice, 15°.													
	1	0	"	-	-	"	Nil - - -	S.S.W.	N.W.	2.3	ditto - - -	- - -	-	-	"	"	"	"														
	1	0	"	-	-	"	Nil - - -	"	"	2.3	- - -	- - -	-	-	"	"	"	"														
	1	0	"	-	-	"	Nil - - -	N. ½ E.	"	2.3	- - -	- - -	-	-	"	"	"	"														
	3	0	"	-	-	"	Nil - - -	"	W.N.W.	2.3	- - -	- - -	-	-	"	"	"	"														
	4	5	"	-	-	"	Nil - - -	N.	"	1.2	ditto - - -	Bow - - -	Topgallant yards.	- Square -	"	"	"	"														
	4	0	-	-	Yes	C. not R.	Making sail - - -	N. by W. ¼ W.	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"															
	1	0	-	-	"	"	Topsails, courses, fore and aft sail.	N. by W.	"	3.4	ditto - - -	ditto - - -	"	Yes -	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	"	W.	2'	ditto - - -	ditto - - -	Yes -	"	"	"	"															
1	5	2	0	-	-	"	ditto - - -	N. by W. ½ W.	"	2'	ditto - - -	ditto - - -	"	"	"	"	"	Weather too thick to take "batten."														
	2	0	-	-	"	"	ditto - - -	N.N.W.	"	3'	ditto - - -	Two points before beam.	"	"	"	"	"	"														
	1	2	-	-	"	"	ditto - - -	"	"	2'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	2	0	-	-	Yes	C. not R.	Plain and topgallant stud- sails.	N. ¼ W.	W.N.W.	1.2	Slight - - -	Bow - - -	- Yes -	- Yes -	All	All	All	All	From 6 a.m. to 2 p.m., ship not rolling.													
	1	5	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	5	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	0	5	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	0	8	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	0	8	-	-	"	"	Plain - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	N. by W. ¼ W.	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	2	-	-	"	"	ditto - - -	N. by W.	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	N. ½ W.	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	N. by W.	W. by N.	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	Plain, except royals	- - -	"	1.2	Slight; cross sea	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	Plain, except mainsail, royals.	- - -	"	-	ditto - - -	ditto - - -	"	Main yard square.	"	"	"	"														
	0	5	-	-	"	"	Topsails, topgallant sails, headsails.	N.W. by N. ½ N.	W.	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	-	2	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	ditto - - -	"	Yes -	"	"	"	"														
	-	2	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	Yes	C. not R.	Topsails, topgallant sails, headsails.	N.N.W.	W.	1.2	Moderate - -	Bow - - -	- Yes -	- Yes -	All	All	All	All	Weather too thick to take batten. Clinometer not regis- tering.													
	1	0	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto, and foresail - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	1	0	-	-	"	"	ditto - - -	"	"	1.2	ditto - - -	ditto - - -	"	"	"	"	"	"														
	0	-	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	0	-	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	Two points before beam.	"	"	"	"	"	"														
	-	-	-	-	"	"	ditto - - -	N. ¼ W.	W.N.W.	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	Topsails and topgallant sails	N.E.	Calm	0	ditto - - -	Beam - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	ditto, headsails, spanker -	N. ½ E.	N.W. by N.	1'	Long but slight; slight swell.	Bow - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	ditto - - -	N.E.	"	1'	ditto - - -	Beam - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	ditto - - -	"	"	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														
	-	-	-	-	"	"	Plain - - -	"	"	1'	ditto - - -	ditto - - -	"	"	"	"	"	"														

REPORT, &c. RELATIVE TO

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—*continued.* -

[illegible]

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

Pitching, when ascertained.	Speed.	Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
		Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.		
Forward.	Alt.																		
Degrees.	K.	T.																	
-	0	0	-	-	Yes	C. not R.	Topsails, topgallant sails, head sails.	Head W. 1/2 N.	North- Easterly	1'	Long but slight swell.	Beam - - -	- Yes -	- Yes -	All	All	All	All.	
-	0	0	-	-	"	"	ditto	N.N.W.	"	1'	ditto	Bow - - -	- " -	- " -	"	"	"	"	
-	0	5	-	-	"	"	ditto	"	"	1'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	0	0	-	-	"	"	ditto	"	E.N.E.	1'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	0	0	-	-	"	"	ditto	N. 1/2 E.	"	1'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	0	0	-	-	"	"	ditto	N. by E.	E. by N.	1'	Slight swell	ditto - - -	- " -	- " -	"	"	"	"	
-	0	0	-	-	"	"	Plain sail	N. 1/2 E.	East	1'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	0	0	-	-	"	"	Furling sails	N. by E.	"	-	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	4	0	Yes	-	-	C. R.	Nil	North	"	1'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	3	0	"	-	-	"	ditto	E. by N.	"	1'	ditto	Beam - - -	- " -	- " -	"	"	"	"	
-	3	0	"	-	-	"	ditto	E. 1/2 N.	N.E.	1'2	ditto	ditto - - -	- " -	- Square -	"	"	"	"	
-	4	3	"	-	-	"	ditto	N.E. by E.	"	2'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	2	5	"	-	-	"	ditto	E. by N.	East	2'3	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	3	0	-	-	Yes	C. not R.	Topsails, first reef ditto, courses, topgallant sails.	S.E.	E.N.E.	3'	ditto	Two points before beam.	- " -	- Yes -	"	"	"	"	
-	2	5	-	-	"	"	Plain, first reef topsails	S.E. 1/2 S.	East	2'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	2	5	-	-	"	"	ditto	S.E. by S.	"	2'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	3	0	-	-	Yes	C. not R.	Plain, fore and aft sails, first reef topsails.	S.E. by S.	E. by N.	3'4	Cross sea, mode- rate.	Bow - - -	- Yes -	- Yes -	All	All	All	All.	
-	2	5	-	-	"	"	ditto	S.E. 1/2 S.	"	3'4	ditto	ditto - - -	- " -	- " -	"	"	"	"	Clinometer not register- ing.
-	2	5	-	-	"	"	ditto	S.E. 1/4 S.	"	3'4	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	3	0	-	-	"	"	ditto	S.E. by S.	"	3'4	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	3	0	-	-	"	"	ditto, except royals	S.E. by S. 1/2 S.	"	3'4	ditto	ditto - - -	- Topgallant yards. -	- " -	"	"	"	"	
-	2	0	-	-	"	D. not R.	ditto	N.N.E.	Easterly	3'4	Moderate	Two points before beam.	- " -	- " -	"	"	"	"	
-	2	8	-	-	"	"	ditto	N.E. by N.	"	3'4	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	4	0	-	-	"	"	ditto	"	E. by N.	4'5	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	4	5	-	-	"	"	ditto	N. by E. 1/4 E.	E.N.E.	4'5	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	4	0	-	-	"	"	Topsails, topgallant sails, foresail, fore and aft sail.	N. by E. 1/2 E.	"	4'5	ditto	Beam - - -	- " -	- " -	9	"	"	"	
-	4	0	-	-	"	"	ditto	N.N.E.	E. by N.	4'5	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	4	0	-	-	"	"	Plain, except royals, first reef topsails.	"	"	4'	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	3	8	-	-	"	"	ditto	N.E. by N. 1/2 N.	East	4'	ditto	ditto - - -	- " -	- " -	10	"	"	"	
-	4	0	-	-	"	"	ditto	N.E. by N.	"	4'	ditto	Two points before beam.	- " -	- " -	10	"	"	"	
-	6	0	-	-	"	"	ditto	N.N.E.	E. by N.	4'5	ditto	ditto - - -	- " -	- " -	10	"	"	"	
-	5	5	-	-	"	"	First reef topsails, topgal- lant sails, head sails.	"	"	6'	ditto	ditto - - -	- " -	- " -	9	"	"	"	Too thick to take batten
-	4	5	-	-	Yes	D. not R.	Ditto, courses, topgallant sails, fore and aft sails.	N.E. by N.	East	4'	Moderate	Beam - - -	- Topgallant yards. -	- Yes -	All	All	All	All.	
-	3	0	-	-	"	"	ditto	"	"	4'	ditto	ditto - - -	- " -	- " -	"	"	"	"	
-	3	8	-	-	"	"	First reef topsails, topgal- lant sails, fore and aft sails.	"	"	4'	Moderate cross sea.	One point before beam.	- " -	- " -	9	"	"	"	
-	4	3	-	-	"	"	Ditto foresail, topgallant sails, fore and aft sails.	"	"	4'	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	4	2	-	-	"	"	First reef topsails, courses, topgallant sails, fore and aft sails.	S. by W.	S.E.	4'	ditto	Beam - - -	- " -	- " -	9	"	"	"	
-	4	0	-	-	"	"	Plain, except royals	S. 1/2 E.	E.S.E.	4'	ditto	Two points before beam.	- " -	- " -	9	"	"	"	
-	4	0	-	-	"	"	ditto	S. by E. 1/2 E.	"	4'	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	4	0	-	-	"	"	ditto	"	E. by S.	4'	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	3	8	-	-	"	"	ditto	"	East	4'	ditto	ditto - - -	- " -	- " -	10	"	"	"	
-	3	0	-	-	"	"	ditto	N.E. by N.	"	4'	ditto	ditto - - -	- " -	- " -	All	"	"	"	
-	3	5	-	-	"	"	ditto	N.E. 1/2 N.	"	3'4	ditto	ditto - - -	- " -	- " -	9	"	"	"	
-	3	5	-	-	"	"	ditto	N.E. 1/4 N.	"	4'	Moderate	Beam - - -	- " -	- " -	9	"	"	"	
-	3	2	-	-	"	"	ditto	S. by E.	"	3'	ditto	Two points before beam.	- " -	- " -	9	"	"	"	
-	1	5	-	-	"	"	Topsails, topgallant sails, foresail, head sails.	"	E. by S.	3'	ditto	ditto - - -	- " -	- " -	12	"	"	"	
-	0	5	-	-	"	"	ditto	"	"	3'	Slight sea	Beam - - -	- " -	- " -	All	"	"	"	
-	2	5	-	-	"	"	ditto	"	"	3'	ditto	ditto - - -	- " -	- " -	"	"	"	"	

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

DATE.	On Board.			Draft of Water, as near as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.											
							Clinometer.					Pendulum.					Batten Instrument.			Clinometer.			Pendulum.			Batten Instrument.					
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	
																															Degrees.
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H. M.																										
30 June	18	4	229	26 3	26 6	5 0 a. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	12	5	15	12	-	-
	18	4	229	26 3	26 6	6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	13	5	17	12	-	-
	18	4	229	26 3	26 6	7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	13	4.5	2.4	13	-	-
	18	4	229	26 3	26 6	8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	13	4.5	2.4	13	-	-
	18	4	229	26 3	26 6	9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	12	5.5	1.0	12	-	-
	18	4	229	26 3	26 6	10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	14	6.0	1.2	12	-	-
	18	4	229	26 3	26 6	11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	12	4	1.7	12	-	-
	18	4	229	26 3	26 6	12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	18	4	229	26 3	26 6	1 0 p. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	4	229	26 3	26 6	2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	4	229	26 3	26 6	3 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	4	229	26 3	26 6	4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1 July	18	4	229	26 3	26 6	5 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18		4	229	26 3	26 6	12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		4	215	26 3	26 6	5 0 a. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		4	215	26 3	26 6	6 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		4	215	26 3	26 6	7 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		4	215	26 3	26 6	8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17		4	215	26 3	26 6	9 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	4	215	26 3	26 6	10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	4	215	26 3	26 6	11 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	4	215	26 3	26 6	12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1 July	17	4	215	26 3	26 6	1 0 p. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2 July	17	4	215	26 3	26 6	2 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</					

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—*continued.*

Pitching, when ascertained.	Speed.			Whether			Whether			SAIL SET.			Course.			Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.	Plain, except royals	Course.	Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.										
Forward.	M.	T.																								
	2	5	-	-	Yes	D. not R.	Plain, except royals	S. by E.	E.S.E.	3'	Moderate; short	One point before beam	Topgallant yards.	- Yes -	All	All	All	All.	Clinometer not registering.							
	2	0	-	-	"	"	ditto	S. by E. 1/2 E.	E. by S.	3'	ditto	ditto	"	"	"	"	"	"	"							
	2	0	-	-	"	"	ditto	S.S.E.	"	3'	ditto	ditto	"	"	"	"	"	"	"							
	2	5	-	-	"	"	ditto	S. 1/2 E.	"	3'	ditto	ditto	"	"	"	"	"	"	"							
	2	0	-	-	"	"	ditto	S.S.E.	"	3'	ditto	ditto	"	"	"	"	"	"	"							
	3	0	-	-	"	"	ditto	S. by E. 1/2 E.	"	3'	ditto	ditto	"	"	"	"	"	"	"							
	3	0	-	-	"	"	ditto	S. by E.	E.S.E.	3'	ditto	ditto	"	"	"	"	"	"	"							
	2	0	Yes	-	C. not R. C. R.	Furling sails Nil	S. by E. E. by N.	"	"	3'	ditto	Ahead	"	Square; quarter yards braced up.	12	12	"	"	"							
1-1	1-0	4	5	"	-	"	Nil	E. 1/2 N.	E. by S.	4'	ditto	ditto	"	"	10	10	"	"	"							
1-0	8	5	0	"	-	"	Nil	"	"	4'	ditto	ditto	"	"	10	10	"	"	"							
1-0	8	5	5	"	-	"	Nil	"	"	3-4	ditto	ditto	"	"	10	10	"	"	"							
1-2	1-0	5	2	"	-	"	Nil	E. by S.	"	3-4	ditto	ditto	"	"	10	10	"	"	"							
1-0	8	5	0	"	-	"	Nil	"	"	3-4	ditto	ditto	"	Yes	10	10	"	"	"							
1-0	8	4	8	"	-	"	Nil	"	"	3-4	ditto	ditto	"	"	10	10	"	"	"							
		3	0	-	Yes	C. not R.	Plain, except royals	N.E.	"	3-4	ditto	One point before beam	"	"	All	All	"	"	"							
		2	5	-	"	"	Topsails, top gallant sails on cap, fore and aft sails.	"	"	3'	ditto	ditto	"	"	"	"	"	"	"							
		2	0	-	Yes	C. not R.	Plain, except royals	N.E. by N.	E.	2'	Slight sea	Two points before beam	Topgallant yards	- Yes -	All	All	All	All.	"							
		2	0	-	"	"	ditto	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
		2	0	-	"	"	ditto	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
		2	5	-	"	"	ditto	N.N.E. 1/2 E.	"	2'	ditto	ditto	"	"	"	"	"	"	"							
		3	0	-	"	"	ditto	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
		2	5	-	"	"	ditto	N.E. by N.	"	2'	ditto	ditto	"	"	"	"	"	"	"							
		2	0	-	"	"	Topsails, headsails, spanker	"	"	2'	ditto	Bow	"	"	"	"	"	"	"							
		1	0	-	"	"	Topsails, top gallant sails, foresail, fore and aft sails.	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
		2	5	-	"	"	Topsails, top gallant sails on cap, foresail, fore and aft sails.	N.E.	"	2'	ditto	ditto	"	"	"	"	"	"	"							
1-0	8	2	0	Yes	-	C. R.	Nil	E. 1/2 S.	E. by S.	2'	ditto	Ahead	"	"	"	"	"	"	"							
8	5	5	0	"	-	"	Nil	E.	"	2'	ditto	ditto	"	"	"	"	"	"	"							
8	5	4	0	"	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
7	5	4	0	"	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
7	5	4	0	"	-	"	Nil	E. 1/2 N.	"	2'	ditto	ditto	"	"	"	"	"	"	"							
8	5	5	0	"	-	"	Nil	E.	"	2-3	ditto	ditto	"	"	"	"	"	"	"							
8	5	5	0	"	-	"	Nil	"	"	2-3	ditto	ditto	"	"	"	"	"	"	"							
1-0	5	5	0	Yes	-	C. R.	Nil	E.	Easterly	2-3	Slight	Ahead	Topgallant yards	- Yes -	All	All	All	All.	"							
1-0	5	4	5	"	-	"	Nil	"	"	2-3	ditto	ditto	"	"	"	"	"	"	"							
5	5	5	0	"	-	"	Nil	"	"	2-3	ditto	ditto	"	"	"	"	"	"	"							
5	5	5	0	"	-	"	Nil	"	"	3'	ditto	ditto	"	"	"	"	"	"	"							
5	5	5	0	"	-	"	Nil	"	"	3'	ditto	ditto	"	"	"	"	"	"	"							
5	5	5	0	"	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	2	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	2	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2-3	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"	Nil	"	"	2'	ditto	ditto	"	"	"	"	"	"	"							
5	5	0	"	-	-	"																				

In tow of Her Majesty's
Ship "Achilles."

"PRINCE CONSORT."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"—continued.

"PRINCE CONSORT."							Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.								
DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Clinometer.					Pendulum.					Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.		
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	M aximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.
4 July	Days.	Ms.	Tons.	Ft. in.	Ft. in.	H.	M.																							
	14	3	129	26 3	26 6	5	0 a. m.	-	-	-	-	3.1	1.4	4.5	7.	10	2.2	1.2	3.4	6.5	12	-	-	-	-	-	-	-	-	-
	14	3	129	26 3	26 6	6	0 "	-	-	-	-	2.1	1.0	3.1	6.	10	-	-	-	-	-	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	7	0 "	-	-	-	-	4.2	3.0	7.2	10.5	12	4.3	2.5	6.8	10.	12	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	2.6	1.5	4.1	7.	10	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	9	0 "	-	-	-	-	4.0	2.5	6.5	9.	12	3.2	1.4	4.6	7.5	11	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	10	0 "	-	-	-	-	2.8	.6	3.4	5.	10	2.3	.4	2.7	4.0	12	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	11	0 "	-	-	-	-	3.6	.8	4.4	4.5	11	3.1	.6	3.7	6.0	12	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	12	0 "	-	-	-	-	-	-	-	-	-	3.0	.5	3.5	6.0	12	-	-	-	-	-	-	-	-	
	14	3	129	26 3	26 6	1	0 p. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	11	3.	2.5	3	12	
	14	3	129	26 3	26 6	2	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9	12	5.	1.8	12	3	
	14	3	129	26 3	26 6	3	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	12	4.	2.0	12	3	
	14	3	129	26 3	26 6	4	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	12	4.	2.0	11	4	
	14	3	129	26 3	26 6	5	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	12	5.	2.5	12	4	
	14	3	129	26 3	26 6	6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	12	4.	1.3	12	3	
	14	3	129	26 3	26 6	7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	11	4.	1.7	12	3	
	14	3	129	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	11	4.	1.7	11	4	
5 July	13	3	128	26 3	26 6	5	0 a. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	1.0	1.0	-	1	
	13	3	128	26 3	26 6	9	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	1.0	1.0	-	1	
	13	3	128	26 3	26 6	10	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	11	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1		
	13	3	128	26 3	26 6	12	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1		
	13	3	128	26 3	26 6	1	0 p. m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	2.0	2.0	-	2	
	13	3	128	26 3	26 6	2	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	2.0	2.0	-	2	
	13	3	128	26 3	26 6	3	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	1.0	1.0	-	1	
	13	3	128	26 3	26 6	4	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	5	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	6	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	7	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	
	13	3	128	26 3	26 6	8	0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	-	1.5	1.5	-	1	

CAPTAIN'S JOURNAL of Her Majesty's Ship "PRINCE CONSORT,"

Sailing.	Steaming.	Tacking.	Wearing.
Since leaving Portland on the 4th ult., the squadron has been under sail 31 days, and sailing always on a wind. Compared with the other ships, the "Prince Consort" may be considered below the average, and is leewardly.	This is decidedly her best point, and her qualities under steam are remarkably good. Her coal consumption is, however, considerable.	She can nearly always be depended on in tacking, and has rarely missed stays; with the screw revolving, never.	This has always been a more difficult operation, especially in light wind with the screw connected or not revolving. On these occasions, mainsail should be invariably With a good breeze she will w quickly from the starboard to port tack; but from port tack starboard she is always slow uncertain.

"PRINCE CONSORT."--RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Prince Consort"--continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
Degrees.																							
-	-	5	0	-	-	-	D. R.	Fore and aft sail	-	East	N.E.	2'	Slight	-	Bow	-	Topgallant yards.	-	Yes	-	All	All	Clinometer not registering. In tow of Her Majesty's Ship "Achilles."
-	-	5	0	-	-	-	"	ditto	-	"	"	2'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4	5	-	-	-	"	ditto	-	"	"	2'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4	5	-	-	-	"	ditto	-	"	"	2'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4	5	-	-	-	"	ditto	-	"	"	3'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4	5	-	-	-	"	ditto	-	"	"	3'	ditto	-	Two points before beam.	-	"	-	"	-	"	"	
-	-	5	0	-	-	-	"	ditto	-	"	N.E. by E.	3'4	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5	0	-	-	-	"	ditto	-	"	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	5	-	-	Yes	D. not R.	Topsail, topgallant sails, fore and aft sail.	-	"	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	5	-	-	"	"	ditto, foresail, topgallant sails on cap.	-	E. by S.	N.E.	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	2	-	-	"	"	Topsails, topgallant sails, foresail, fore and aft sail.	-	E. 1/2 S.	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	2	-	-	"	"	ditto	-	"	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	2	-	-	"	"	1st reef topsails, topgallant sails, fore and aft sail.	-	E. 1/2 N.	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	2	0	-	-	"	"	ditto	-	E. 1/2 S.	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	2	5	-	-	"	"	ditto	-	"	"	4'	Moderate	-	ditto	-	"	-	"	-	"	"	
-	-	3	0	-	-	"	"	ditto	-	"	"	4'	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	2	5	-	-	Yes	D. not R.	ditto, and courses	-	E. by N.	N.E. by E.	2'3	None	-	-	-	Topgallant yards	-	Yes	-	All	All	
-	-	2	5	-	-	"	"	Plain, except royals	-	"	"	2'	ditto	-	-	-	"	-	"	-	"	"	
-	-	2	0	-	-	"	"	ditto	-	"	"	2'	ditto	-	-	-	"	-	"	-	"	"	
-	-	2	5	-	-	"	"	ditto	-	"	"	2'	ditto	-	-	-	"	-	"	-	"	"	
-	-	2	5	-	-	"	"	ditto	-	"	"	2'	ditto	-	-	-	"	-	"	-	"	"	
-	-	3	0	-	-	"	"	Plain sail	-	"	Northerly	2'3	ditto	-	-	-	"	-	"	-	"	"	
-	-	4	0	-	-	"	"	ditto	-	E. by N. 3/4 N.	"	2'3	ditto	-	-	-	Yes	-	"	-	"	"	
-	-	4	0	-	-	"	"	ditto	-	"	"	2'3	ditto	-	-	-	"	-	"	-	"	"	
-	-	3	5	-	-	"	"	ditto, except royals	-	N.E. by E. 1/2 E.	"	2'3	Slight	-	One point before beam.	-	"	-	"	-	"	"	
-	-	3	5	-	-	"	"	ditto	-	"	"	2'3	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	2	5	-	-	"	"	ditto	-	E. by N.	"	2'3	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	0	-	-	"	"	Topsails, topgallant sails, head sails.	-	E. by N. 1/4 N.	"	3'4	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	5	-	-	"	"	ditto	-	E. by N. 1/2 N.	"	3'4	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3	0	-	-	"	"	Topsails, topgallant sails, fore and aft sail.	-	E.N.E.	"	3'4	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4	0	-	-	"	"	Plain, except royals	-	N.E. by E. 1/2 E.	"	3'4	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4	0	-	-	"	"	ditto	-	"	"	3'4	ditto	-	ditto	-	"	-	"	-	"	"	

between the 5th June and the 5th July 1868.

Pitching and Rolling.	Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.
The principal defect in the "Prince Consort" is her propensity for rolling. It interferes with fighting her guns, with the handling of sails and spars, and with her general efficiency.	She pitches easily, and not deeply. When not disturbed by heavy rolling motion, the guns are worked with facility. Her efficiency would be much improved by adopting iron carriages and metal racers for those guns not so fitted. During the cruise, on one day only, the main deck ports could not have been opened without flooding the deck.	I have no recommendation to offer, nor do I suppose that any alteration would improve her qualities.	During the late cruise the weather has been unusually fine, and no water taken in on the upper deck; but from my former experience in the Channel, I consider her a wet ship.	I cannot speak too highly of her performances under steam. The rapidity with which she turns is surprising.

Wm. Armytage, Captain.

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "DEFENCE."

[illegible]

“ D E F E N C E ”

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship "DEFENCE."

Pitching when ascertained.			Speed.		Whether			Whether with		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.			
Forward.					Under Steam only.			or Disconnected and Revolving.					Direction.		Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.		Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.		If Upper are Aloft.		If Yards are Braced up.		Weather. Lee.		Weather. Lee.		
Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.																						
-	-	5	2	-	-	Yes	-	Up	-	Sail as requisite to keep station.	W. N. W.	N. E. by N.	4	Long undulation	Quarter	-	-	Yes	-	No	-	All	All	All	All.		
-	-	4	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	4	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	4	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
4	3	4	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	2	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3	8	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	2	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	2	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	2	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	1	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	1	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
3	4	3	0	-	-	Yes	-	Up	-	Plain sail as requisite to keep station.	W. by N.	N. N. E.	2	Moderate	Quarter	-	-	Yes	-	No	-	All	All	All	All.		
3	4	2	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	1	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	1	5	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	2	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3	1	5	-	-	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	1	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	1	0	-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
3	3	1	0	-	-	"	-	Down	-	Nil	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	Performing steam evolutions.	3	0	Yes	-	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"	ditto	ditto	-	-	"	-	"	-	"	"	"	"		
-	-	3		-	-	"	-	"	-	ditto	"	"	"														

REPORT, &c. RELATIVE TO

"DEFENCE."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Defence"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																	
							Clinometer.					Pendulum.					Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.											
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.									
																															Degrees.	Degrees.	Degrees.						
Days.	Ms.	Tons.	Ft. in.	Ft. in.	H.	M.																																	
12 June 1868	52	3/4	308	23	8	25	8	6	0 a.m.	-	-	-	-	-	6	4	10	15	5	6	4	10	14 1/2	5	-	-	-	-	-	-	-	-							
								7	0 "	-	-	-	-	-	6	5	11	15 1/2	5	5	6	5	11	15 1/2	5	5	5	7 1/2	5	-	-	-	-	-	-	-			
								8	0 "	-	-	-	-	-	4	2	6	9	5	5	3	2	5	7	5	5	5	7	5	-	-	-	-	-	-	-			
								9	0 "	-	-	-	-	-	3	2	5	7	5	5	3	2	5	6	4	2	5	6	5	-	-	-	-	-	-	-	-		
								10	0 "	-	-	-	-	-	4	2	6	9	6	6	4	2	6	9	6	4	2	6	5	-	-	-	-	-	-	-	-		
								11	0 "	-	-	-	-	-	3	1 1/2	4 1/2	6	5	5	3	2	5	6 1/2	5	3	2	5	6 1/2	5	-	-	-	-	-	-	-	-	
								12	0 "	-	-	-	-	-	3	1	4	6	5	5	3	1	4	6	5	3	1	4	6	5	-	-	-	-	-	-	-	-	
								1	0 p.m.	-	-	-	-	-	3	1	4	6	5	5	3	1 1/2	3 1/2	5 1/2	6	4	3 1/2	5 1/2	6	6	-	-	-	-	-	-	-	-	
								2	0 "	-	-	-	-	-	2	1 1/2	2 1/2	4	6	6	2	2	1	3	4	5	1	3	4	5	-	-	-	-	-	-	-	-	-
								3	0 "	-	-	-	-	-	2	1	3	4	5	5	2	2	1	3	4	5	2	1	3	4	5	-	-	-	-	-	-	-	-
								4	0 "	-	-	-	-	-	3 1/4	1 1/2	4 3/4	6 1/2	5	5	3	1 1/2	4 1/2	7	4	5	1 1/2	4 1/2	7	5	-	-	-	-	-	-	-	-	-
								5	0 "	-	-	-	-	-	2	1	3	4	5	5	2	2	1	3	4	5	2	1	3	4	5	-	-	-	-	-	-	-	-
								6	0 "	-	-	-	-	-	3	1	4	6	6	6	2 1/2	1 1/2	4	6	6	2 1/2	1 1/2	4	6	6	-	-	-	-	-	-	-	-	-
								13 June 1868	51	3/4	287	23	8	25	8	6	0 a.m.	-	-	-	-	-	2	1	3	4	4	2	1	3	4	4	-	-	-	-	-	-	-
7	0 "	-	-	-	-	-	2									1	3	4	5	2	1	3	4	5	2	1	3	4	5	-	-	-	-	-	-	-	-		
8	0 "	-	-	-	-	-	2									1	3	4	4	4	2	1	3	4	4	2	1	3	5	-	-	-	-	-	-	-	-		
9	0 "	-	-	-	-	-	2									1 1/2	3 1/2	4	4	4	2	1	3	4 1/2	4	2	1	3	4 1/2	4	-	-	-	-	-	-	-	-	
10	0 "	-	-	-	-	-	2									2	4	6	5	5	2	1 1/2	3 1/2	6	5	2	1 1/2	3 1/2	6	5	-	-	-	-	-	-	-	-	
11	0 "	-	-	-	-	-	2									1	3	4	5	5	2	2	1	4	5	2	2	1	4	5	-	-	-	-	-	-	-	-	
12	0 "	-	-	-	-	-	1 1/2									1	2 1/2	5	4	4	2	1	3	5	4	2	1	3	5	4	-	-	-	-	-	-	-	-	
1	0 p.m.	-	-	-	-	-	1									1	3	5	3	5	2	1 1/2	2 1/2	5	3	2	1 1/2	2 1/2	5	3	-	-	-	-	-	-	-	-	
2	0 "	-	-	-	-	-	1									1 1/2	1 1/2	4	5	4	5	1	1 1/2	4	5	1	1 1/2	1 1/2	4	5	-	-	-	-	-	-	-	-	
3	0 "	-	-	-	-	-	1									1 1/2	1 1/2	4	4	4	4	1	1	4	4	1	1	1 1/2	4	4	-	-	-	-	-	-	-	-	-
4	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	0 "	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14 June 1868	50	3/4	279	23	8	25	8									6	0 a.m.	-	-	-	-	-	5	4	9	13	5	5	3	8	13	5	-	-	-	-	-	-	-
								7	0 "	-	-	-	-	-	6	5	11	16	5	6	5	11	16	5	6	4	10	16	5	-	-	-	-	-	-	-	-		
								8	0 "	-	-	-	-	-	6	5	11	16	6	6	4	10	16	6	6	5	10	16	6	-	-	-	-	-	-	-	-		
								9	0 "	-	-	-	-	-	7	5	12	18	5	7	5	12	17	5	7	5	12	17	5	-	-	-	-	-	-	-	-	-	
								10	0 "	-	-	-	-	-	9	8	17	24	5	8	8	16	22	5	8	8	16	22	5	-	-	-	-	-	-	-	-	-	
								11	0 "	-	-	-	-	-	8	8	16	22	5	9	8	17	23	5	9	8	17	23	5	-	-	-	-	-	-	-	-	-	
								12	0 "	-	-	-	-	-	9	8	17	22	5	9	8	17	22	5	9	8	17	22	5	-	-	-	-	-	-	-	-	-	
								1	0 p.m.	-	-	-	-	-	7	6	13	19	6	7	7	14	20	6	7	7	14	20	6	-	-	-	-	-	-	-	-	-	
								2	0 "	-	-	-	-	-	6	5	11	15	5	6	5	11	17	5	6	5	11	17	5	-	-	-	-	-	-	-	-	-	
								3	0 "	-	-	-	-	-	4	4	8	12	5	5	4	9	13	5	5	4	9	13	5	-	-	-	-	-	-	-	-	-	-
								4	0 "	-	-	-	-	-	4	3	7	12	5	4	3	7	11	5	4	3	7	11	5	-	-	-	-	-	-	-	-	-	
								5	0 "	-	-	-	-	-	3	2	5	10	5	3	2 1/2	5 1/2	9	5	3	2 1/2	5 1/2	9	5	-	-	-	-	-	-	-	-	-	
								6	0 "	-	-	-	-	-	3	2 1/2	5 1/2	9	5	3	2	5	8	5	3	2	5	8	5	-	-	-	-	-	-	-	-	-	
								15 June 1868	49	3/4	269	23	8	25	8	6	0 a.m.	-	-	-	-	-	5	3	8	12	5	5	3	8	12	5	-	-	-	-	-	-	-
7	0 "	-	-	-	-	-	6									2	8	12	5	5	3	8	13	5	3	8	13	5	-	-	-	-	-	-	-	-	-		
8	0 "	-	-	-	-	-	4									3	7	11	5	4	2	7	11	5	4	2	7	11	5	-	-	-	-	-	-	-	-		
9	0 "	-	-	-	-	-	4									4	8	12	5	4	2	8	12	5	4	2	8	12	5	-	-	-	-	-	-	-	-		
10	0 "	-	-	-	-	-	8									5	13	15	5	5	5	15	15	5	5	5	15	15	5	-	-	-	-	-	-	-	-		
11	0 "	-	-	-	-	-	5									4	9	14	6	5	3	8	11	6	5	3	8	11	6	-	-	-	-	-	-	-	-		
12	0 "	-	-	-	-	-	5									4	9	13	5	5	4	9	14	5	5	4	9	14	5	-	-	-	-	-	-	-	-		
1	0 p.m.	-	-	-	-	-	4									4	8	13	5	4	4	8	13	5	4	4	8	13	5	-	-	-	-	-	-	-	-	-	
2	0 "	-	-	-	-	-	5									4	9	14	5	4	4	8	12	5	4	4	8	12	5	-	-	-	-	-	-	-	-	-	
3	0 "	-	-	-	-	-	6									5	11	16	5	6	4	10	15	5	6	4	10	15	5	-	-	-	-	-	-	-	-	-	
4	0 "	-	-	-	-	-	5									3	8	12	6	5	3	8	13	6	5	3	8	13	6	-	-	-	-	-	-	-	-	-	
5	0 "	-	-	-	-	-	5									3	8	13	5	5	2	7	11	5	5	2	7	11	5	-	-	-	-	-	-	-	-	-	
6	0 "	-	-	-	-	-	5									2	7	11	5	5	2	7	11	5	5	2	7	11	5	-	-	-	-	-	-	-	-	-	
16 June 1868	48	3 wks.	264	23	8	25	8									6	0 a.m.	-	-	-	-	-	3	2	5	7	5	3	2	5	7	5	-	-	-	-	-	-	-
								7	0 "	-	-	-	-	-	3	3	6	6	5	3	2	5	7	5	3	2	5	7	5	-	-	-	-	-	-	-	-		
								8	0 "	-	-	-	-	-	2	1 1/2	3 1/2	5	4	3	2	1	3	4	5	2	1	3	4	5	-	-	-	-	-	-	-	-	
								9	0 "	-	-	-	-	-	3	2	5	7	5	3	2	5	7	5	3	2	5	7	5	-	-	-	-	-	-	-	-		
								10	0 "	-	-	-	-	-	3	2 1/2	5 1/2	8	5	3	3	6	6	5	3	3	6	6	5	-	-	-	-	-	-	-	-		
								11	0 "	-	-	-	-	-	3	2	5	7	5	3	2	5	8	5	3	2	5	8	5	-	-	-	-	-	-	-	-		
								12	0 "	-	-	-	-	-	3	2	5	7	5	3	2 1/2	5 1/2	8	5	3	2 1/2	5 1/2	8	5	-	-	-	-	-	-	-	-		
								1	0 p.m.	-	-	-	-	-	2	1	3	5	5	5	2 1/2	1 1/2	4	7	5	1 1/2	4	7	5	-	-	-	-	-	-	-	-		
								2	0 "	-	-	-	-	-	1	1	2	5	5	5	1	2	5	5	5	1	2	5	5	-	-	-	-	-	-	-	-	-	
								3	0 "	-	-	-	-	-	1 1/2	1	2 1/2	5	5	5	1 1/2	1 1/2	4	5	5	1 1/2	1 1/2	4	5	-	-	-	-	-	-	-	-		
								4	0 "	-	-	-	-	-	1	1 1/2	1 1/2	4	5	4	1	1 1/2																	

"DEFENCE."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Defence"—continued.

Pitching, when ascertained.	Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.							
			Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.								
	Degrees.	K.																		T.						
-	-	1	0	-	-	Yes	Down	-	Topsails, courses, and jib	N.W.	Calm and variable.	0 to 1	Moderate -	-	On bow	-	Yes	-	No	-	All	All	All	All.	Absent from squadron, from this date to 18th June.	
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-	"	"	-	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	"	"		
-	-	0	0	-	-																					

REPORT, &c. RELATIVE TO

"DEFENCE."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Defence"—*continued.*

"DEFINITION."—RETURN OF ROLLING AND PERPENDICULARITY.																															
DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.									
							Clinometer.					Pendulum.					Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.			
	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.		Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.						
																										Degrees.					Degrees.
Provisions.	Stores.	Coals.	Forward.	Aft.	H.	M.																									
Days.	Ms.	Tons.	Ft. in.	Ft. in.																											
17 June 1868	47	3	240	23	8	25	8	6	0 a.m.	-	-	-	-	-	2	1½	3½	6	5	2	1	3	5	5	-	-	-				
								7	0 "	-	-	-	-	-	2	1	3	6	5	2	1	3	5	5	4	-	-	-	-	-	
								8	0 "	-	-	-	-	-	1½	1	2½	5	4	2	1	3	6	4	5	-	-	-	-	-	
								9	0 "	-	-	-	-	-	1	1	3	6	5	3	1	4	7	5	-	-	-	-	-	-	
								10	0 "	-	-	-	-	-	4	2	6	9	6	4	2	6	9	6	-	-	-	-	-	-	-
								11	0 "	-	-	-	-	-	3	1	4	6	5	2½	1½	4	6	5	-	-	-	-	-	-	-
								12	0 "	-	-	-	-	-	2	1	3	5	5	2	1	3	5	5	-	-	-	-	-	-	-
								1	0 p.m.	-	-	-	-	-	2	1½	3½	5½	4	2	1	3	5	4	-	-	-	-	-	-	-
								2	0 "	-	-	-	-	-	1½	1	2½	4	5	2	1½	3½	5	5	-	-	-	-	-	-	-
								3	0 "	-	-	-	-	-	2	1	3	6	5	2	1	3	6	5	-	-	-	-	-	-	-
								4	0 "	-	-	-	-	-	2	1	3	5	5	2½	1	3½	5	5	-	-	-	-	-	-	-
								5	0 "	-	-	-	-	-	2½	1	3½	6	5	2	1	3	5	5	-	-	-	-	-	-	-
6	0 "	-	-	-	-	-	1½	1	2½	4½	5	1	1	2	4	5	-	-	-	-	-	-	-								
18 June 1868	46	4	258	23	8	25	8	6	0 a.m.	-	-	-	-	-	2	1	3	5	5	1	1	2	5	-	-	-	-				
								7	0 "	-	-	-	-	-	2	1	3	5	5	1½	1	2½	4	-	-	-	-	-	-	-	
								8	0 "	-	-	-	-	-	1½	1	2½	5	5	1½	1	2½	5	-	-	-	-	-	-	-	
								9	0 "	-	-	-	-	-	1	1	3	6	6	2	1	3	6	-	-	-	-	-	-	-	
								10	0 "	-	-	-	-	-	1	1	2	5	5	1½	1	2½	5	-	-	-	-	-	-	-	
								11	0 "	-	-	-	-	-	1½	1	2½	4	6	1	1	2	4	-	-	-	-	-	-	-	
								12	0 "	-	-	-	-	-	2	1	3	5	5	1	1	2	4	-	-	-	-	-	-	-	
								1	0 p.m.	-	-	-	-	-	2½	1	3½	4	6	2	1	3	6	-	-	-	-	-	-	-	
								2	0 "	-	-	-	-	-	2	1	3	6	6	2	1	3	6	-	-	-	-	-	-	-	
								3	0 "	-	-	-	-	-	2	1	3	5	5	1	1	2	5½	-	-	-	-	-	-	-	
								4	0 "	-	-	-	-	-	1	1	2	4½	5	1	1	2	5	-	-	-	-	-	-	-	
								5	0 "	-	-	-	-	-	1½	1	2½	4	5	2	1	3	6	-	-	-	-	-	-	-	
6	0 "	-	-	-	-	-	1	1	2	4	5	1	1	2	4	-	-	-	-	-	-	-									
19 June 1868	45	4	245	23	8	25	8	6	0 a.m.	-	-	-	-	-	4	3	7	9	5	3½	3	6½	8	5	-	-	-	-			
								7	0 "	-	-	-	-	-	3½	3	6½	9	5	3	3	6	9	5	-	-	-	-	-	-	
								8	0 "	-	-	-	-	-	3½	3½	7	10	5	3½	3	6½	9	5	-	-	-	-	-	-	
								9	0 "	-	-	-	-	-	3	2	5	7	5	3	2	5	6½	5	-	-	-	-	-	-	
								10	0 "	-	-	-	-	-	2½	2	4½	6½	5	2	2	4	6	5	-	-	-	-	-	-	
								11	0 "	-	-	-	-	-	3	3	6	9	5	3½	3	6½	9	5	-	-	-	-	-	-	
								12	0 "	-	-	-	-	-	3	2	5	7½	5	3	2	5	7	5	-	-	-	-	-	-	
								1	0 p.m.	-	-	-	-	-	3½	3½	7	11	4	3½	3	6½	10	4	-	-	-	-	-	-	
								2	0 "	-	-	-	-	-	3	2	5	8	5	3	3	6	9	5	-	-	-	-	-	-	
								3	0 "	-	-	-	-	-	3	3	6	10	5	3	3	6	9½	5	-	-	-	-	-	-	
								4	0 "	-	-	-	-	-	2	2	4	6½	5	3	2	5	7	5	-	-	-	-	-	-	
								5	0 "	-	-	-	-	-	2½	2	4½	7	5	2½	2	4½	6	5	-	-	-	-	-	-	
6	0 "	-	-	-	-	-	3	2	5	8	5	3	2½	5½	8	5	-	-	-	-	-	-									
20 June 1868	43	4	244	23	8	25	8	6	0 a.m.	-	-	-	-	-	4	3	7	9	5	3½	3	6½	8	5	-	-	-	-			
								7	0 "	-	-	-	-	-	5	1	6	9	5	5	2	7	10	5	-	-	-	-	-		
								8	0 "	-	-	-	-	-	5	2	7	10½	5	5	2	7	10	5	-	-	-	-	-		
								9	0 "	-	-	-	-	-	4	3	7	10	5	3½	3	6½	9	5	-	-	-	-	-		
								10	0 "	-	-	-	-	-	3	3	6	8½	6	3	3	6	9	5	-	-	-	-	-		
								11	0 "	-	-	-	-	-	4	2	6	9	5	4	3	7	10	5	-	-	-	-	-		
								12	0 "	-	-	-	-	-	3	3	6	9	5	3	3	6	9	5	-	-	-	-	-		
								1	0 p.m.	-	-	-	-	-	4	3	7	10	5	3½	3	6½	10	5	-	-	-	-	-		
								2	0 "	-	-	-	-	-	4	2½	6½	10	6	4	3	7	9½	6	-	-	-	-	-		
								3	0 "	-	-	-	-	-	3½	3	6½	9	5	3½	3	6½	9	5	-	-	-	-	-		
								4	0 "	-	-	-	-	-	4	2	6	10	5	4	3	7	10	5	-	-	-	-	-		
								5	0 "	-	-	-	-	-	3	3	6	9	5	3	3	6	11	5	-	-	-	-	-		
6	0 "	-	-	-	-	-	4	2½	6½	9	5	4	3	7	12	5	-	-	-	-	-										

“DEFENCE.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Defence”—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.				
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.							
Degrees.																											
-	-	3	5	-	-	Yes	-	-	Plain sail and starboard studding sails.	N.W.	N.E. by E.	3	Moderate	-	Beam	-	-	-	Yes	-	Yes	-	All	All	All	All.	
-	-	3	8	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	4	0	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	3	5	Steaming round target			-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	4	0	-	-	Yes	-	-	Double-reefed topsails and courses.	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	4	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	5	0	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	4	5	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	5	2	-	-	"	-	-	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	Yes	-	Up	All plain sail	S.E.	Calm and variable.	0 to 1	Moderate	-	Bow	-	-	-	Yes	-	Yes	-	All	All	All	All.	
-	-	0	5	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	1	0	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	1	0	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	1	5	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	2	0	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	1	2	-	-	"	-	"	Topsails and jib	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	0	5	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-	"	-	"	-	"	"	"	"	
-	-	-	-	-	-	"	-	"	ditto	"	"	"	ditto	-	ditto	-	-	-									

"DEFENCE."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Defence"—continued.

[illegible]

“DEFENCE.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Defence”—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.				
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.		Force.	Nature; i.e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i.e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.						
-	-	1	0	-	-	Yes	Screw up	-	Various, as requisite to keep station.	N.E.	North-westerly.	1 to 2	Short	-	-	Bow	-	-	Yes	-	Yes	-	All	All	All	All.
-	-	2	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	2	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	8	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	2	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	0	8	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	0	Yes	-	Yes	Screw up	-	As requisite to keep station.	Easterly	S.S.E.	2	Moderate	-	-	Bow	-	-	Yes	-	Yes	-	All	All	All	All.
-	-	0	8	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	0	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	Perform- ing steam	-	-	Yes	-	Screw down	-	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	evo-	-	-	-	-	-	-	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	lutions.	-	-	-	-	-	-	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	-	-	-	-	-	-	-	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	-	-	-	-	-	-	-	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	0	-	-	Yes	Down, not disconnected.	-	As requisite to keep station.	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	6	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	5	-	-	Yes	Screw down, not disconnected.	-	As requisite to keep station.	S.W. by W.	N.W.	4 to 5	Moderate	-	-	Beam	-	-	Yes	-	Yes	-	All	All	All	All.
-	-	3	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	2	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	2	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	4	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	4	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	4	8	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	4	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	4	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	5	-	-	Yes	Screw down, not disconnected.	-	As requisite to keep station.	N.W.	W.S.W.	2 to 3	Long	-	-	Bow	-	-	Yes	-	Yes	-	All	All	All	All.
-	-	2	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	8	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	2	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	-	-	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	1	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	Perform- ing steam	-	-	Yes	-	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	evo-	-	-	-	-	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	lutions.	-	-	-	-	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	-	-	-	Yes	-	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	0	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"
-	-	3	5	-	-	"	-	"	-	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"	"

“DEFENCE.”—RETURN of Rolling and Performance at Sea of Her Majesty's Ship “Defence”—*continued.*

[illegible]

“DEFENCE.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Defence”—continued.

Pitching, when ascertained.		Speed.			Whether			Whether with			SAIL SET.			Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.	Screw Raised, or Disconnected and Revolving.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction, i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.					
-	-	1	2	-	-	Yes	Screw down, not disconnected.	Sail as requisite to keep station.	N.N.W.	West	1 to 2	Moderate -	-	Quarter	-	-	Yes	-	Yes	-	All	All	All	All.		
-	-	1	0	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-	"	-	"	-	"	"	"		
-	-	0	5	-	-	"	"	ditto	"	"	"	ditto	-	-	ditto	-	-</									

"DEFENCE."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Defence"—*continued.*

[illegible]

CAPTAIN'S JOURNAL of Her Majesty's Ship "DEFENCE,"

Date.	Sailing.	Steaming.	Tacking.	Wearing.	Rolling.
1 June	- At anchor in Portland Roads.				
2 "					
3 "					
4 "					
5 "					
6 "					
7 "					
8 "					
9 "					
10 "					
11 "					
12 "					
13 "					
14 "					
15 "					
16 "					
17 "	During these days the "Defence" under sail proved herself always inferior to H.M.S. "Warrior," and on one occasion inferior to H.M.S. "Achilles." But on all other occasions the "Defence" proved herself superior to the other vessels of the fleet.	During the days under steam, the "Defence" proved herself a slow vessel under steam, but is very economical with regard to coals.	"Defence" tacks as quickly as any vessel in the squadron, generally taking about 6 minutes 30 seconds in the evolution, under favourable circumstances.	"Defence" wears as badly as any ship possibly could, taking 13 minutes from the time of putting the helm up until the vessel is before the wind.	"Defence" rolled more during the days at sea than either "Minotaur," "Achilles," "Bellerophon," or "Warrior;" and less than either "Royal Oak," "Prince Consort," or "Pallas."
18 "					
19 "					
20 "					
21 "					
22 "					
23 "					
24 "					
25 "					
26 "					
27 "					
28 "					
29 "					
30 "					
1 July					
2 "					
3 "					
4 "					
5 "					
6 "					

“DEFENCE.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Defence”—continued.

Pitching, when ascertained.	Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.		
			Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
	Degrees.	K.																		T.	
-	-	3 8	-	-	Yes	Screw raised	All plain sail, save royals	S.S.E.	Easterly	3 to 4	Short	-	Bow	-	Yes	-	Yes	-	All	All	Chasing to windward.
-	-	3 8	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4 2	-	-	"	"	ditto	N. by E. ½ E.	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4 5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4 5	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3 8	-	-	Yes	Screw down, not discon- nected.	Plain sail, except royals -	East	E. by S.	3 to 4	Moderate	-	Bow	-	Yes	-	Yes	-	All	All	
-	-	3 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	2 8	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3 2	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3 0	-	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	3 0	Yes	-	"	"	Nil	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 5	"	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 2	"	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	6 0	"	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	6 0	"	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	5 0	"	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	
-	-	4 0	"	-	"	"	ditto	"	"	"	ditto	-	ditto	-	"	-	"	-	"	"	

between the 1st June and the 6th July 1868.

Pitching.	Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.
“Defence” pitches easily, and without strain- ing. She sends aft very deeply, as she took water in through the stern ports on three occasions, when royal yards were across.	“Defence” could have fought her guns on all these days, but the precision of fire would have depended on the motion, which was never excessive, as the weather was fine.	I consider the distribution of weights good, but recommend fittings to be supplied for se- curing quarter-deck guns amidships on the upper deck, when in a heavy sea, as the ship sends aft so deeply.	“Defence” proved herself a very dry ship during all these days.	“Defence” under steam is moderately bandy; and under sail I consider her almost unmanageable, and very un- bandy.

" P A L L A S."

RETURN of ROLLING and PERFORMANCE at SEA of Her Majesty's Ship " PALLAS."

Pitching, when ascertained.		Speed.			Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Sh iping Water.		Number of Guns that could be Fought with Safety.		REMARKS.	
Forward.	Aft.	Degrees.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
-	-	4	8	-	-	-	Yes	-	Fixed	-	All plain sail	-	W.N.W.	N.	4 to 5	Moderate	-	Bow	-	All	All	All	All	Bar instrument impracticable.
1-	0-5	5	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	Clinometer, under the half-deck; Pendulum, in after hatchway, upper deck; Batten Instrument on the bridge.
-	-	5	2	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
1-2	0-7	4	4	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	4	2	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	5	0	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	Ballast stowed according to dockyard arrangement, and six tons of shot/removed from shot lockers, &c., into the tiller compartment abaft the after ward-room.
1-2	0-7	5	2	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	4	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	4	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
1-2	0-2	2	2	-	-	-	Yes	-	Fixed	-	All plain sail	-	W.N.W.	N.	4 to 2	Moderate	-	Bow	-	All	All	All	All	No apparent change in rolling attributable to weights.
-	-	2	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	2	0	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
1-2	0-2	2	8	-	-	-	"	-	"	-	ditto	-	W.byN.½N.	"	"	ditto	-	ditto	-	"	"	"	"	
2-	1-	1	5	-	-	-	"	-	"	-	ditto	-	W.N.W.	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
2	0-5	1	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
0-7	0-5	1	0	-	-	-	Yes	-	Fixed	-	All plain sail	-	W. by N.	N.N.W.	1	Long	-	Beam	-	All	All	All	All	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	S.W. by W.	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	S.W. by S.	N.W. by W.	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	W. by N.	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	W. by S.	"	1	Moderate	-	Bow	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	W. by N.	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	W.N.W.	N.	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
0-5	-	0	0	-	-	-	Yes	-	Fixed	-	All plain sail	-	W.N.W.	Calm	0	Moderate	-	Beam	-	All	All	All	All	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	0	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	0	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	0 to 1	Long	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	2	0	-	-	-	"	-	"	-	ditto	-	W. ¾ N.	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	W.byN.¾N.	"	"	ditto	-	ditto	-	"	"	"	"	
-	-	2	0	-	-	-	Yes	-	Fixed	-	Stay, top, and topgallant studding sails.	-	W.N.W.	N.E.	1	Long	-	Bow	-	All	All	All	All	
-	-	2	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	2	2	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	2	2	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	2	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	Beam	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	Moderate	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	Yes	-	Fixed	-	Stay, top, and topgallant studding sails.	-	W.N.W.	N.N.W.	1	Moderate	-	Beam	-	All	All	All	All	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	0	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	1	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	0	5	-	-	-	"	-	"	-	ditto	-	"	"	1	ditto	-	ditto	-	"	"	"	"	
-	-	-	-	-	-	-	"	-	"	-	ditto	-	"	"	0	ditto	-	ditto	-	"	"	"	"	
-	-	-	-	-	-	-	"	-	"	-	ditto	-	"	"	0	ditto	-	ditto	-	"	"	"	"	
-	-	-	-	-	-	-	"	-	"	-	ditto	-	"	"	0	ditto	-	ditto	-	"	"	"	"	
-	-	-	-	-	-	-	"	-	"	-	ditto	-	"	"	0	ditto	-	ditto	-	"	"	"	"	

REPORT, &c. RELATIVE TO

"PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—continued.

DATE.		On Board.			Draft of Water, as nearly as can be ascertained.		Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.														
							Clinometer.					Pendulum.					Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.								
																															Time of Taking and Recording Observations.					
							Provisions.	Stores.	Coal.	Forward.	Aft.	Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	
		Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.																													
14 June 1868		78	3	196	18 6	24 6	8 0 a.m.	6.6	7.8	14.4	22	12	8	8.3	16.3	23	12	7.5	8	15.5	22	12	-	-	-	-	-	-	-	-	-					
							9 0 "	6	6	12	15	12	7.3	8	15.3	16	12	7	8	15	16	12	7	8	15	16	-	-	-	-	-	-	-	-		
							10 0 "	3	7	10	10	12	3.5	6.5	10	10	12	4	6.5	10.5	10	12	4	6.5	10.5	10	12	-	-	-	-	-	-	-	-	
							11 0 "	4	7	11	11	13	4	8	12	12	13	4.5	8.5	13	12	13	4.5	8.5	13	12	13	-	-	-	-	-	-	-	-	
							Noon	5	7	12	12	13	5.5	8	13.5	14	12	4.8	5.6	10.4	13	12	4.8	5.6	10.4	13	12	-	-	-	-	-	-	-	-	
							1 0 p.m.	4.2	5.8	10	12	12	5	6	11	13	12	5	6	11	13	12	5	6	11	13	12	-	-	-	-	-	-	-	-	-
							2 0 "	3	9	12	12	12	4.6	10	14.6	15	12	5	10	15	15	12	5	10	15	15	12	-	-	-	-	-	-	-	-	-
							3 0 "	2.5	5.4	7.9	8	13	3.2	6.5	9.7	9	13	3.5	7	10.5	9	13	3.5	7	10.5	9	13	-	-	-	-	-	-	-	-	-
							4 0 "	3.2	4.5	7.7	8	13	3.5	5.2	8.7	8	13	3.5	5	8.5	9	13	3.5	5	8.5	9	13	-	-	-	-	-	-	-	-	-
							15 June 1868		78	3	193	18 6	24 6	8 0 a.m.	3	3	6	6	13	5	5	10	10	13	5	5	10	10	13	-	-	-	-	-	-	-
9 0 "	1.3	3	4.3	6	13	4.3								3.3	7.6	10	13	3.6	4.6	8.2	10	13	3.6	4.6	8.2	10	13	-	-	-	-	-	-	-		
10 0 "	4.6	5.6	10.2	13	13	5.6								6.6	12.2	15	13	5.3	6.3	11.6	13	13	5.3	6.3	11.6	13	13	-	-	-	-	-	-	-	-	
11 0 "	2.5	3	5.5	6	13	5								5	10	10	13	5	5	10	10	13	5	5	10	10	13	-	-	-	-	-	-	-	-	-
Noon	8	10	18	18	13	10								12	22	22	13	10	12	22	22	13	10	12	22	22	13	-	-	-	-	-	-	-	-	-
1 0 p.m.	1	3	4	4	12	2								4.6	7	7	13	2	5	7	7	13	2	5	7	7	13	-	-	-	-	-	-	-	-	-
2 0 "	11	9	20	20	12	13								10	23	23	12	13	10	23	23	12	13	10	23	23	13	-	-	-	-	-	-	-	-	-
3 0 "	10	9	19	20	12	15								10	26	26	12	15	10	26	26	12	15	10	26	26	13	-	-	-	-	-	-	-	-	-
4 0 "	11	12	23	23	12	14								16	30	30	12	14	16	30	30	12	14	16	30	30	12	-	-	-	-	-	-	-	-	-
6 30 "	13	11.5	24.5	26	12	15								16.5	32	32	12	15.2	16.8	32	32	12	15.2	16.8	32	32	12	-	-	-	-	-	-	-	-	-
7 30 "	13.5	12.2	25.7	26	13	15	16.2	32	32	12	15.5	16.8	32.3	33	12	15.5	16.8	32.3	33	12	-	-	-	-	-	-	-	-	-							
8 0 "	14	14	28	28	13	17	17	34	34	13	17.5	18	35.5	36	13	17.5	18	35.5	36	13	-	-	-	-	-	-	-	-	-							
16 June 1868		78	3	188	18 6	24 6	6 10 a.m.	13	15	28	28	12	15	17	32	34	12	15	17	32	34	12	-	-	-	-	-	-	-	-	-					
							7 30 "	7.5	7	14.5	16	12	8	8.3	16.3	17.5	12	8.3	8.5	16.8	19	12	8.3	8.5	16.8	19	12	-	-	-	-	-	-	-		
							8 0 "	12.2	14.5	26.7	28	13	13.5	15.6	29.1	30	12	13.6	16.2	29.8	31	12	13.6	16.2	29.8	31	12	-	-	-	-	-	-	-	-	
							9 0 "	13	14	27	27	12	14	15	29	29	13	14	15	29	29	13	14	15	29	29	13	-	-	-	-	-	-	-	-	
							10 0 "	9	10	19	20	13	10	12	22	22	13	10	12	22	22	13	10	12	22	22	13	-	-	-	-	-	-	-	-	
							11 0 "	9	10	19	19	13	10	10	20	20	13	10	11	21	21	13	10	11	21	21	13	-	-	-	-	-	-	-	-	-
							Noon	8.5	10	18.5	20	13	10.5	12.5	23	24	13	11	13	24	25	13	11	13	24	25	13	-	-	-	-	-	-	-	-	-
							1 0 p.m.	9	10	19	19	13	10	11	21	21	13	10	12	22	23	13	10	12	22	23	13	-	-	-	-	-	-	-	-	-
							2 0 "	5	5	10	10	13	5.5	6.4	11.9	12	13	5.2	6.5	11.7	12	13	5.2	6.5	11.7	12	13	-	-	-	-	-	-	-	-	-
							3 0 "	4.2	4.6	8.8	9	13	5.2	5.8	11	12	13	5	5	10	12	13	5	5	10	12	13	-	-	-	-	-	-	-	-	-
4 0 "	3.5	3	7	5	13	4	4	8	8	13	3.5	4	7.5	8	13	3.5	4	7.5	8	13	-	-	-	-	-	-	-	-	-							
17 June 1868		78	3	188	18 6	24 6	8 0 a.m.	1	2.5	3.5	4	13	2	2.5	4.5	4.6	13	2.2	4	6.2	6	13	-	-	-	-	-	-	-	-	-					
							10 0 "	1	2	3	4	14	3	4.5	7.5	8	14	3	4.2	7.2	8	14	3	4.2	7.2	8	14	-	-	-	-	-	-	-		
							12 0 "	1	2	3	3	14	3.2	4.8	8	9	14	4.5	4.4	8.9	9	14	4.5	4.4	8.9	9	14	-	-	-	-	-	-	-	-	
							2 0 p.m.	1.5	2	3.5	4	14	3.5	4	7.5	10	14	3.5	4	7.5	10	14	3.5	4	7.5	10	14	-	-	-	-	-	-	-	-	
							4 0 "	1	3	4	4	14	2.5	4.5	7	9	14	2.5	4.5	7	9	14	2.5	4.5	7	9	14	-	-	-	-	-	-	-	-	
18 June 1868		78	3	188	18 6	24 6	8 0 a.m.	2.2	3.5	5.7	4	14	3.6	5.2	8.8	9	14	3.5	5.5	9	10	14	-	-	-	-	-	-	-	-	-					
							10 0 "	2	3.3	5.3	6	14	3.5	5.5	9	10	14	3.5	5.5	9	10	14	3.5	5.5	9	10	14	-	-	-	-	-	-	-		
							12 0 "	5	6	11	10	13	6.8	7.5	14.3	15	13	6.5	7.8	14.3	15	13	6.5	7.8	14.3	15	13	-	-	-	-	-	-	-		
							2 0 p.m.	3.5	3.6	7.1	8	14	4	4	8	8	14	4	4	8	8	14	4	4	8	8	14	-	-	-	-	-	-	-	-	
							4 0 "	2.5	3	5.5	6	14	3	3.5	6.5	7	14	3.5	3	6.5	7	14	3.5	3	6.5	7	14	-	-	-	-	-	-	-	-	
19 June 1868		78	3	188	18 6	24 6	8 0 a.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	8	2	2	8	2	2	8	2						
							10 0 "	0.5	3.2	3.7	4	15	1.5	5	6.5	7	15	2	5	7	7	15	2	5	7	7	15	-	-	-	-	-	-			
							12 0 "	0.8	2.5	3.3	4	15	2	3.5	5.5	9	15	2	6	8	8	15	2	6	8	8	15	-	-	-	-	-	-	-		
							2 0 p.m.	0.5	1	1.5	3	15	1.8	4	6.8	9.8	15	2	6.5	8.5	9	15	2	6.5	8.5	9	15	-	-	-	-	-	-	-		
							4 0 "	0.3	1	1.3	3	15	1.6	2	3.6	5.6	15	2	6	8	8	15	2	6	8	8	15	-	-	-	-	-	-	-	-	
20 June 1868		77	3	188	18 6	24 6	8 0 a.m.	2.5	6.5	9	9	14	3.6	7.2	10.8	12	14	4	7	11	12	14	2	-	-	-	-	-	-	-	-					
							10 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	12	5	3	12	6	3	12	6	
							12 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	12	6	3	12	6	3	12	6	
							2 0 p.m.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.5	12	4	3	12	5	2	12	6	
							4 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	3	2	12	4	2	12	4	

"PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—continued.

Pitching, when ascertained.			Speed.			Whether			Whether with			SAIL SET.			Course.			Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.					
Forward.			Aft.			Under Steam only.			Under Steam and Sail.			Under Sail only.			Screw Raised, or Disconnected and Revolving.			Direction.			Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.		Directions; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.		If Upper are Aloft.		If Yards are Braced up.		Weather.		Lee.		
Degrees.	R.	T.																															
			0	5				Yes	Fixed		All plain sail			S. W.	Calm	0	None		Beam					All	All	All	All	Bar instrument impracticable.					
			0	5				"	"		ditto			S. S. W.	"	"	ditto		ditto					"	"	"	"	Clinometer under the half deck; pendulum in after hatchway, upper deck; batten instrument on the bridge.					
			0	2				"	"		ditto			S.	Light	0	ditto		ditto					"	"	"	"						
			0	2				"	"		ditto			N. N. W.	"	Variable to	Moderate		ditto					"	"	"	"						
			1	0				"	"		ditto			N. by E.	"	"	ditto		ditto					"	"	"	"						
			0	5				"	"		ditto			"	Airs	1	ditto		Bow					"	"	"	"	Ballast stowed according to dockyard arrangement, and six tons of shot removed from shot-lockers, &c. into the tiller compartment abaft the after-ward room.					
			-	-				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
			-	-				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
			-	-				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
			0	5				Yes	Fixed		All plain sail			N. W.	Airs	1	None		Bow					All	All	All	All	No apparent change in rolling attributable to weights.					
			0	5				"	"		ditto			"	N.N.E.	"	ditto		ditto					"	"	"	"						
			0	5				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
			1	0				"	"		ditto			N.W. by W.	"	"	Long		Beam					"	"	"	"						
			-	-				"	"		ditto			½ W.	"	"	ditto		ditto					"	"	"	"						
			1	5				"	"		ditto			"	"	"	None		ditto					"	"	"	"						
			0	5				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
			-	-				"	"		ditto			"	"	"	Long		ditto					"	"	"	"						
			-	-				"	"		ditto			"	Calm	0	ditto		ditto					"	"	"	"						
			-	-				"	"		ditto			"	"	"	ditto		Bow					"	"	"	"						
			-	-				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
			-	-				"	"		ditto			"	"	"	ditto		ditto					"	"	"	"						
0.8	-	2	5			Yes	Fixed		All studding sails		N.W. by W.	S.E. by E.	1 to 2	Short			Beam						All	All	All	All							
		2	5			"	"		ditto		"	"	"	ditto			Bow						"	"	"	"							
		2	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
1.5	1	2	5			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		2	5			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		3	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		2	5			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		2	5			"	Disconnected		ditto		"	"	"	ditto			ditto						"	"	"	"							
		3	0			"	"		ditto		"	"	"	None			ditto						"	"	"	"							
		3	5			"	"		ditto		"	"	"	Short			Aft						"	"	"	"							
		4	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		8	0			Yes	Disconnected		Fore top and fore topgal-lant studding sails.		N.W. by W.	E.	6	Moderate			Aft						All	All	All	All							
		7.5	0			"	"		ditto		"	"	5	ditto			ditto						"	"	"	"							
		7	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		6.8	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		6.8	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		2	0			Yes	Disconnected		Fore top and fore topgal-lant studding sails.		N.W. by W.	E.	2	Moderate			Aft						All	All	All	All							
		2	6			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		1	0			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		0	5			"	"		ditto		W.N.W.	"	1	ditto			ditto						"	"	"	"							
		0	5			"	"		ditto		"	"	"	ditto			ditto						"	"	"	"							
		1	8			Yes	Disconnected		All plain sail		S.W.	W.N.W.	1	Moderate			Beam						All	All	All	All							
		1	5			"	"		ditto		S. by W.	W.	2	ditto			ditto						"	"	"	"							
		2	5			"	"		ditto		N.W. ½ W.	W.S.W.	1	ditto			ditto						"	"	"	"							
		2	5			"	"		ditto		N.W. ½ N.	W.	"	ditto			ditto						"	"	"	"							
		3	5			"	"		ditto		N. by W.	W. by N.	"	ditto			ditto						"	"	"	"							
		1	8			Yes	Disconnected		All plain sail		N. by W.	W. by N.	1	Moderate			Beam						All	All	All	All							
		3	8			"	"		Topsail, foresail and jibs		W. S.W.	W.N.W.	5	Short			Bow						"	"	"	"							
		3	0			"	"		ditto		S.W. by W.	"	3	ditto			ditto						"	"	"	"							
		3	0			"	"		ditto		W. S.W.	"	"	ditto			ditto						"	"	"	"							
		2	5			"	"		Topsail and jib		N. by E. ½ E.	"	"	ditto			ditto						"	"	"	"							

Note.—"Pallas" joined the squadron early on the morning of 20th June.

REPORT, &c. RELATIVE TO

"PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.													When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																		
							Clinometer.					Pendulum.					Batten Instrument.			Clinometer.			Pendulum.			Batten Instrument.												
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.								
																															Degrees.					Degrees.		
Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.																																	
21 June 1868	77	3	188	18 6	24 6	6 0 a.m.	10	10	20	20	13	15	15	30	30	13	15.5	16.5	33	33	13	-	-	-	-	-	-	-	-	-	-	-						
						7 0 "	7	8	15	17	13	9	10.5	19.5	20	13	8.5	10	18.5	21	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						8 0 "	7.5	8.2	15.7	18	13	9	11	20	22	13	8.5	10.5	19	21	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						9 0 "	3.2	3	6.2	8	13	4	4.5	8.5	14	14	5.2	8.7	13.9	15	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						10 0 "	5	5	10	11	13	5.5	6.8	12.3	16	14	6.5	7	13.5	15	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						11 0 "	3	2	5	6	13	4	4	8	8	13	4	4	8	8	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						12 0 noon	7	6	13	14	13	8	7.5	15.5	15	13	8.5	7.5	16	16	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						1 0 p.m.	5.2	4.5	9.7	11	13	6	5	11	14	13	7	6	13	14	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						2 0 "	3	2	5	8	14	5	5	10	12	14	5.5	6	11.5	14	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						3 0 "	3	3	6	10	12	4	5	9	10	12	5	5	10	10	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						4 0 "	2	1	3	6	12	3	4	7	6	12	1.5	3	4.5	6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						5 0 "	3	4	7	8	12	5	5	10	10	12	4.5	5	9.5	10	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
						6 0 "	6	7.5	13.5	14	12	7	9	16	8	12	7	10	17	8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
22 June 1868	76	3	184	18 6	24 6	6 0 a.m.	11	9	20	23	12	14.6	12	26.6	28	12	14	13	27	29	12	-	-	-	-	-	-	-	-	-	-	-						
						7 0 "	8	9	17	18	12	9.5	11	20.5	21	12	9	10	19	20	12	-	-	-	-	-	-	-	-	-	-	-	-					
						8 0 "	3	5	8	8	13	5	5	10	10	14	5	5	10	10	14	-	-	-	-	-	-	-	-	-	-	-	-					
						9 0 "	7	7	14	14	13	8.5	8.5	17	14	13	8	9	17	17	13	-	-	-	-	-	-	-	-	-	-	-	-					
						10 0 "	6	5	11	14	14	8	7	15	22	13	15	15	30	30	13	-	-	-	-	-	-	-	-	-	-	-	-					
						11 0 "	9	11	20	20	15	11	11	22	22	15	7	7	14	20	15	-	-	-	-	-	-	-	-	-	-	-	-	-				
						12 0 noon	7	8	15	20	13	8	9	17	20	13	6	8	14	20	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						1 0 p.m.	9	10	19	20	13	10	10	20	16	13	8	10	18	20	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						2 0 "	6	6	12	16	14	7	8	15	16	14	6	7	13	16	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						3 0 "	6	5	11	13	14	7	9	16	16	14	7	9	16	16	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						4 0 "	4.5	5	9.5	12	14	6	8	14	16	16	8	14	22	16	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						5 0 "	7	9	16	18	13	10	12	22	25	13	11	12	23	26	13	-	-	-	-	-	-	-	-	-	-	-	-	-				
						6 0 "	6	9	15	16	13	10	10	20	22	13	10	11	21	22	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
23 June 1868	75	3	180	18 0	24 6	6 0 a.m.	8	9	17	18	13	10	10	20	23	13	10	12	22	24	13	-	-	-	-	-	-	-	-	-	-	-						
						7 0 "	6	13	19	22	13	13	17	30	32	13	12	15	27	28	13	-	-	-	-	-	-	-	-	-	-	-	-					
						8 0 "	9	9	18	17	14	10	15	25	28	14	10	16	26	27	14	-	-	-	-	-	-	-	-	-	-	-	-					
						9 0 "	9	14	23	25	14	12	17	29	30	14	11	17	28	28	14	-	-	-	-	-	-	-	-	-	-	-	-					
						10 0 "	9	15	24	27	14	12	19	31	34	14	11	19	30	31	14	-	-	-	-	-	-	-	-	-	-	-	-					
						11 0 "	8.5	14	22.5	22	14	10	16	26	28	14	10	16	26	28	14	-	-	-	-	-	-	-	-	-	-	-	-					
						12 0 noon	7	12	19	20	14	9	15	24	26	14	9	15	24	26	14	-	-	-	-	-	-	-	-	-	-	-	-					
						1 0 p.m.	8.2	8.6	16.8	20	14	9.6	25.6	28	14	14	9	15	24	26	14	-	-	-	-	-	-	-	-	-	-	-	-					
						2 0 "	4	9	13	15	14	5	12	17	19	14	5.8	14	19.8	21	14	-	-	-	-	-	-	-	-	-	-	-	-					
						3 0 "	5	7	12	12	14	6	9	15	13	14	6	8	14	15	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						4 0 "	8	10	18	25	14	7	9	16	25	14	10	12	22	25	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
						24 June 1868	75	3	177	18 0	24 6	6 0 a.m.	5	5	10	10	14	5	6	11	12	14	5	7	12	13	14	-	-	-	-	-	-	-	-	-	-	-
												7 0 "	3	4	7	8	14	5	6	11	11	14	5	5	10	12	14	-	-	-	-	-	-	-	-	-	-	-
8 0 "	3	5	8	8	14							3	8	11	13	14	4	8	11	13	14	-	-	-	-	-	-	-	-	-	-	-	-					
9 0 "	3	4	7	9	14							4	6	10	12	14	4	6	10	12	14	-	-	-	-	-	-	-	-	-	-	-	-					
10 0 "	7	8	15	15	14							7	8	15	15	14	7	9	16	16	14	-	-	-	-	-	-	-	-	-	-	-	-					
11 0 "	4	5	9	15	14							5	6	11	15	14	3	5	8	15	14	-	-	-	-	-	-	-	-	-	-	-	-					
12 0 noon	4	5	9	11	14							6	7	13	13	14	4	5	9	11	14	-	-	-	-	-	-	-	-	-	-	-	-					
1 0 p.m.	5	7	12	14	14							6	8	14	14	14	6	8	14	14	14	-	-	-	-	-	-	-	-	-	-	-	-					
2 0 "	6	8	14	14	13							7	8	15	16	13	7	8	15	16	13	-	-	-	-	-	-	-	-	-	-	-	-					
3 0 "	1	3	4	6	14							2	3	5	6	14	0	2	2	4	14	-	-	-	-	-	-	-	-	-	-	-	-	-				
4 0 "	0	0	0	0	0							3	2	5	5	15	3	2	5	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-				
5 0 "	0	0	0	0	0							2	1	3	3	15	2	1	3	3	15	-	-	-	-	-	-	-	-	-	-	-	-	-				
6 0 "	0	0	0	0	0							2	2	4	4	15	2	2	4	4	15	-	-	-	-	-	-	-	-	-	-	-	-	-				
25 June 1868	74	3	174	18 0	24 6	6 0 a.m.	0	0	0	6	0	2	2	0	4	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
						7 0 "	0	0	0	0	0	2	3	5	5	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
						8 0 "	0	0	0	0	0	2	2	4	4	14	-	-	-	-	-	-	-	-	-	-	-	-	-									

"PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.	Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.				Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
1	2	2	1			Yes	Disconnected	Topsail and jib	N.N.E.	W.N.W.	3	Short	Bow			All	All	All	All	Bar instrument impracticable.
4	2	2	1			"	"	Ditto to try sails	N.E. by E.	N.N.W.	4	ditto	Beam			"	"	"	"	Clinometer under the half deck; pendulum in the after hatchway upper deck; batten instrument on the bridge.
5	2	2	1			"	"	ditto	N.E. by N.	"	"	ditto	ditto			"	"	"	"	
2	1	2	1			"	"	All plain sail	"	"	2	ditto	ditto			"	"	"	"	
3	1	1	1			"	"	ditto	N.E. by E.	"	"	ditto	ditto			"	"	"	"	Ballast stowed according to dockyard arrangement, and six ton of shot removed from shot lockers, &c., into the tiller compartment abaft the after ward room.
1	1	1	8			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	5			"	"	Topsail, jib, and spanker	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	5			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	No apparent change in rolling attributable to weights.
1	1	1	5			"	"	ditto	N.E.	"	"	ditto	ditto			"	"	"	"	
1	0	0	8			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
4	2	0	8			Yes	Connected	All plain sail	S.E. ½ S.	N.W.	1	Long	Bow			All	All	All	All	
1	1	0	5			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	0	0	Yes		"	"	ditto	"	"	"	ditto	ditto	Topgallant	Square	"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	Various	"	"	Moderate	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	Double-reefed topsails	S.S.W.	West	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	Fore course and jib and main trysail	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	1	1	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
5	3	2	0			Yes	Connected	Fore course and jib and main trysail	S.S.W.	West	2	Short	Bow			All	All	All	All	
1	3	2	8			"	"	ditto	S.W. by W.	N.W. by W.	6	ditto	ditto			"	"	"	"	
1	3	2	8			"	"	ditto	"	"	5	ditto	ditto			"	"	"	"	
1	3	1	5			"	"	ditto	W.S.W.	N.W.	3	ditto	ditto			"	"	"	"	
1	3	3	0			"	"	ditto	"	"	5 to 6	ditto	ditto			"	"	"	"	
1	3	4	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	3	5			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	3	0			"	"	Single-reefed topsails	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	5			"	"	Jib and spanker	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	5			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	2	2	5			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
2	1	2	5	Yes		Yes	Connected	All plain sail	N.E. ½ E.	N.W.	2	Short	Bow			All	All	All	All	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto	Yes	Square	"	"	"	"	
1	3	2	0			"	"	None	"	"	"	Astern	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	N. by W.	W.N.W.	2	None	Bow			All	All	All	All	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	
1	3	2	0			"	"	ditto	"	"	"	ditto	ditto			"	"	"	"	

"PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—*continued.*

"PALLAS."—RETURN OF ROLLING.																																
DATE.		On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.		Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.								
									Clinometer.					Pendulum.					Batten Instruments.					Clinometer.			Pendulum.			Batten Instrument.		
									Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.
Provisions.	Stores.	Coals.	Forward.	Aft.	H. M.																											
26 June 1868	-	74	3	173	18 0	24 6	6 0 a.m.	2	2	4	4	15	3.5	2.5	6	6.8	15	-	-	-	-	-	-	-	-							
							7 0 "	4	4	8	8	15	4.8	4.6	9.4	10	15	-	-	-	-	-	-	-	-	-	-					
							8 0 "	3	2	5	6	15	4.2	4.5	8.7	9.1	15	-	-	-	-	-	-	-	-	-	-					
							9 0 "	1.5	2	3.5	4	15	3	4	7	8	15	-	-	-	-	-	-	-	-	-	-					
							10 0 "	1.7	2	3.7	3.8	15	4.5	5	9.5	10	15	-	-	-	-	-	-	-	-	-	-	-				
							11 0 "	2	2	4	4	15	3.5	2.8	6.3	7	15	-	-	-	-	-	-	-	-	-	-	-				
							12 0 noon.	2	2	4	4	15	2.8	2.8	5.6	7	15	-	-	-	-	-	-	-	-	-	-	-				
							1 0 p.m.	1.5	2	3.5	4	15	3	4	7	8	15	-	-	-	-	-	-	-	-	-	-	-				
							2 0 "	0.5	1	1.5	2	15	4	5.5	9.5	10	15	-	-	-	-	-	-	-	-	-	-	-				
							3 0 "	0	0	0	0	0	2	1.5	3.5	4	16	-	-	-	-	-	-	-	-	-	-	-				
							4 0 "	0	0	0	0	0	1.8	2	3.8	4	16	-	-	-	-	-	-	-	-	-	-	-				
							5 0 "	10	10	20	20	13	14	14	28	28	14	-	-	-	-	-	-	-	-	-	-	-	-			
27 June 1868	-	73	2	-	18 0	24 6	8 0 a.m.	0	0	0	0	0	1.5	1.5	3	4	14	1.8	3	Fog 4.8	5	14	-	-	-	-						
							10 0 "	0	0	0	0	0	0	2	3	5	14	14	3	7	10	11	14	-	-	-	-					
							12 0 noon.	1.5	2	3.5	5	14	3.5	3.5	7	10	14	3	7	12.8	14	14	-	-	-	-	-					
							2 0 p.m.	3	4	7	8	14	5.5	6.4	11.9	14	14	5.8	7	12	13	14	-	-	-	-	-					
							4 0 "	3	5	8	8	14	5	7	12	13	14	5	7	12	13	14	-	-	-	-	-	-				
28 June 1868	-	72	2	168	18 0	24 6	8 0 a.m.	2	0	2	2	14	5	3	8	9	14	5	3	8	9	14	-	-	-	-						
							9 0 "	1	3	4	4	14	2	5	7	8	14	2	5	7	8	14	-	-	-	-	-	-				
							10 0 "	2	8	10	10	14	5	9	14	14	14	5	9	14	14	14	-	-	-	-	-	-				
							11 0 "	6	9	15	17	16	8	12	20	22	16	8	12	20	22	16	-	-	-	-	-	-				
							12 0 noon.	6.5	9	15.5	16	15	7	11	18	20	15	7	11	18	20	15	-	-	-	-	-	-				
							1 0 p.m.	7	9	16	17	15	9	12	21	23	15	9	12	21	23	15	-	-	-	-	-	-				
							2 0 "	6.2	9.5	15.7	17	15	7.4	10	17.4	19	15	8	11	19	21	15	-	-	-	-	-	-				
							3 0 "	5.8	8.2	14	16	15	7.6	10.6	17.8	20	15	7.5	10.5	18	20	15	-	-	-	-	-	-				
							4 0 "	5.6	9	14.6	17	15	8	11	19	20	15	8	11	19	20	15	-	-	-	-	-	-				
							29 June 1868	-	71	2	167	18 0	24 6	6 0 a.m.	6	7	13	14	12	7.5	9.5	17	19	14	8	9	17	18	14	-	-	-
7 0 "	5	7	12	13	13	6								10	16	18	13	6	10	16	18	13	-	-	-	-	-	-				
8 0 "	1.8	6.2	8	8	13	4								8	12	14	13	4	8	12	14	13	-	-	-	-	-	-				
9 0 "	5.5	0.5	6	8	13	7.5								2.8	10.3	12	13	8	3	11	13	13	-	-	-	-	-	-				
10 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	4	13	4	5	13	6	4.5	13	5	
11 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	5	13	5	6	13	6	4.5	13	5	
12 0 noon.	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	4	13	4	5	13	5	4	13	14	
1 0 p.m.	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	3.5	13	5	5	13	5	4.5	13	4	
2 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	5	13	6	5	13	5	4.8	13	4	
3 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	3	13	4	3.8	13	5	3	13	5	
4 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	3.8	13	5	4	13	5	4	13	5	
5 0 "	-	-	-	-	-	-								-	-	-	-	-	-	-	-	-	2.8	13	4	3.5	13	4	3.8	13	4	
6 0 "	4	4	8	8	14	5	5	10	10	14	4.5	4.5	9	10	13	-	-	-	-	-	-	-	-	-								
30 June 1868	-	70	2	164	18 0	24 6	6 0 a.m.	0	0	0	0	0	4	2	6	7	14	3	1.5	4.5	5	14	-	-	-	-						
							7 0 "	0	0	0	0	0	5	2	7	7	14	4	1	5	5	14	-	-	-	-	-	-				
							8 0 "	6	2	8	7.5	14	7.8	3.2	11	12	14	7	3	10	12	14	-	-	-	-	-	-				
							9 0 "	4	2	6	7	15	5	2	7	8	14	3	2	5	7	15	-	-	-	-	-	-				
							10 0 "	4.8	4	8.8	10	15	6	5.5	11.5	12	15	5	5	10	11	15	-	-	-	-	-	-				
							12 0 noon.	3.5	3	6.5	7	15	4	3.8	7.8	8	15	3	4	7	7	15	-	-	-	-	-	-				
							2 0 p.m.	3	3	6	8	14	5	2	7	8	13	3	3	6	7	14	-	-	-	-	-	-				
							4 0 "	2	1	3	3	14	3	2.5	5.5	6	14	2	1	3	3	14	-	-	-	-	-	-				
							6 0 "	1	1.5	2.5	3	14	3	2	5	5	14	2	1.5	3.5	4	14	-	-	-	-	-	-				
							8 0 "	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	5	5	12	7	4.5	12	6	

"PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—continued.

Pitching, when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.	SAIL SET.		Course.	Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "On Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.	
-	-	0	8	-	-	-	Connected	All plain sail -	-	N. by W.	W.N.W.	2	None	Bow	-	-	All	All	All	All	Bar instrument impracticable.
-	-	1	0	-	-	-	"	All plain sail, except royals	-	"	"	"	ditto	ditto	-	-	"	"	"	"	Clinometer under the half deck; pendulum in after hatchway, upper deck; batten instrument on the bridge.
-	-	1	0	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
-	-	0	5	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
-	-	0	5	-	-	-	"	ditto	-	"	"	0	ditto	ditto	-	-	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	Ballast stowed according to dockyard arrangement, and six tons of shot removed from shot-lockers, &c. into the tiller compartment abaft the after ward-room.
-	-	-	-	-	-	-	"	ditto	-	"	"	"	Long	Ahead	-	-	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	No apparent change in rolling attributable to weights.
-	-	-	-	Yes	-	-	Connected	All plain sail, except royals	-	N. by W.	E.	1	None	Ahead	-	-	All	All	All	All	
-	-	-	-	-	-	-	"	None	-	"	"	"	ditto	ditto	-	Yes	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	Various	"	"	ditto	Bow	-	-	"	"	"	"	
-	-	-	-	-	-	-	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	An apparent decrease in rolling as the weights below become less.
2	1	4	2	-	-	Yes	Fixed	All plain sail, except royals	-	N. by E.	E.	4	None	Bow	-	-	All	All	All	All.	
"	"	3	-	-	-	"	"	ditto	-	"	"	"	Short	ditto	-	-	"	"	"	"	
"	"	4	-	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	2	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
3	1.5	4	8	-	-	"	"	ditto	-	N.N.E.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	8	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
3	2	5	4	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	8	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	3	5	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
3	2	4	5	-	-	Yes	Fixed	All plain sail, except royals	-	N. N. E.	E.	3	Short	Bow	-	-	All	All	All	All.	
"	"	4	-	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	2	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	-	-	-	"	"	ditto	-	S.S.E.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	3	5	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	3	2	-	-	"	"	ditto	-	S. S. E.	"	3	ditto	ditto	-	-	"	"	"	"	
"	"	3	-	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	3	-	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	3	-	-	-	"	"	ditto	-	N.E. by N.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	5	-	-	-	"	"	ditto	-	N.E. ¾ E.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	5	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	4	5	-	-	"	"	ditto	-	"	"	4	ditto	ditto	-	-	"	"	"	"	
"	"	5	5	-	-	"	"	ditto	-	N.E.	"	"	ditto	ditto	-	-	"	"	"	"	
3	2	3	-	-	-	Yes	Fixed	All plain sail, except royals	-	S. by E.	E.	4 to 6	Short	Bow	-	-	All	All	All	All.	
"	"	3	-	-	-	"	"	ditto	-	S. ½ W.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	2	-	-	-	"	"	ditto	-	S.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	3	-	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	-	-	-	-	"	"	None	-	Various	"	"	ditto	ditto	-	-	All except bow.	All except bow.	All except bow.	All except bow.	
"	"	-	-	-	-	"	"	ditto	-	"	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	-	-	-	-	"	"	ditto	-	N.E.	"	"	ditto	ditto	-	-	"	"	"	"	
"	"	-	-	-	-	"	"	ditto	-	N. N. E.	"	"	ditto	ditto	-	-	"	"	"	"	

“PALLAS.”—RETURN of Rolling and Performance at Sea of Her Majesty’s Ship “Pallas”—continued.

DATE.	On Board.			Draft of Water, as nearly as can be ascertained.		Time of Taking and Recording Observations.	Mean Rolling Motion, ascertained from Five Minute Observations by each Instrument.															When Ship is under Sail, and not Rolling to Windward of Perpendicular, Mean Heel ascertained by Five Minute Observations of each Instrument.																																
							Clinometer.					Pendulum.					Batten Instrument.					Clinometer.			Pendulum.			Batten Instrument.																										
	Provisions.	Stores.	Coals.	Forward.	Aft.		Starboard.	Port.	TOTAL.	Maximum Roll.	Mean Number of Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum Roll.	Oscillations per Minute.	Starboard.	Port.	TOTAL.	Maximum.	Oscillations per Minute.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.	Degrees of Heel (Mean).	Number of Heels per Minute.	Maximum Inclination.																								
																															Degrees.					Degrees.					Degrees.													
1 July 1868	Days.	Mths.	Tons.	Ft. in.	Ft. in.	H. M.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	12	5	5	12	7	45	12	6																								
						8 0 a.m.																									1	7	8	8	15	3	8	11	12	15	2.5	7	9.5	11	15	2	9	4	4	9	6	3	9	5
						9 0 "																																																
						11 0 "																																																
12 0 noon	1.5	3	4.5	5	15	2.8	4	6.5	8.5	10	15	2	4	6	8	15	-	-	-	-	-	-	-	-	-	-	-	-	-																									
2 July 1868	68	2	138	17 6	24 6	8 0 a.m.	0	0	0	0	0	1.5	1.5	3	3	14	1	1	2	2	14	-	-	-	-	-	-	-	-	-	-	-																						
						10 0 "	0	0	0	0	0	1.8	1.5	3.3	4	14	1	1	2	3	14	-	-	-	-	-	-	-	-	-	-	-	-	-																				
						12 0 noon	0	0	0	0	0	1	1	2	3	14	1	1	2	3	14	-	-	-	-	-	-	-	-	-	-	-	-	-																				
						2 0 p.m.	0	0	0	0	0	1	2	3	3	14	1	2	3	3	14	-	-	-	-	-	-	-	-	-	-	-	-	-																				
4 0 "	0	0	0	0	0	1	2	2	3	14	1	2	3	3	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-																									
3 July 1868	67	2	125	17 6	24 6	8 0 a.m.	0	0	0	0	0	1	1	2	2	14	1	1	2	2	14	-	-	-	-	-	-	-	-	-	-	-																						
						10 0 "	0	0	0	0	0	1	1	2	2	14	1	1	2	2	14	-	-	-	-	-	-	-	-	-	-	-	-																					
						12 0 noon	0	0	0	0	0	1	1	2	2	14	1	1	2	2	14	-	-	-	-	-	-	-	-	-	-	-	-	-																				
						2 0 p.m.	1	1	2	2	14	2	2	4	4	14	2	2	4	2	14	-	-	-	-	-	-	-	-	-	-	-	-	-																				
4 0 "	2	3	5	5	14	3	3	6	6	14	3	2	5	2	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-																									

Her Majesty’s Ship

JOURNAL of the QUALITIES of the Ship to accompany

Sailing.	Steaming.	Tacking.	Wearing.	Rolling.	Pitching.
Weatherly, but slow; as she lightens of coal, her sailing is very much improved.	At the last full speed trial, the engines worked up to the same power as on the measured mile, with a slight diminution of speed.	Sure with a moderate breeze and smooth water, rather slow in coming to the wind; but in comparison with other iron-clads the whole evolution is quick.	Very Slow.	The motion quick, but easy; since we have had the ballast on the upper deck, and weight decreased below, she certainly appears to roll less.	She rarely pitches, and it is very easy, except when using much steam power against a heavy sea, when it is very violent.

- "PALLAS."—RETURN of Rolling and Performance at Sea of Her Majesty's Ship "Pallas"—continued.

Pitching when ascertained.		Speed.		Whether			Whether with Screw Raised, or Disconnected and Revolving.		SAIL SET.		Course.		Wind.		Sea or Swell.		State of Yards.		Number of Ports that could be kept Open without Shipping Water.		Number of Guns that could be Fought with Safety.		REMARKS.
Forward.	Aft.	K.	T.	Under Steam only.	Under Steam and Sail.	Under Sail only.					Direction.	Force.	Nature; i. e., whether "Considerable," "Heavy," "Long," "Short," "Moderate," "None," &c.	Direction; i. e., whether "Ahead," "Aft," "on Bow," "Beam," "Quarter," &c.	If Upper are Aloft.	If Yards are Braced up.	Weather.	Lee.	Weather.	Lee.			
-	-	-	-	-	-	Yes	-	-	One reef in topsails.	N. E.	-	-	-	-	-	-	-	All	All	All	All	Bar instruments impracticable.	
-	-	-	-	-	-	"	-	-	All except sails on mainmast; shifting main topgallant trestle-trees.	N. N. E. ½ E.	-	-	None	-	-	-	-	"	"	"	"	Clinometer under the half deck; pendulum in the after hatchway, upper deck; batten instrument on the bridge.	
-	-	3	5	-	-	"	-	-	ditto	N. N. E.	-	-	Short	-	Bow	-	-	"	"	"	"		
-	-	3	0	-	-	"	-	-	ditto	"	-	-	ditto	-	ditto	-	-	"	"	"	"		
-	-	-	-	-	-	-	-	-	All except sails on mainmast; shifting main topgallant trestle-trees.	N. N. E.	-	-	Short	-	Bow	-	-	All	All	All	All	Ballast stowed according to dockyard arrangement, and six tons of shot removed from shot lockers, &c. into the tiller compartment, abaft the after ward-room.	
-	-	2	0	-	-	-	-	-	None	E. by S.	E.	2	None	-	ditto	-	-	"	"	"	"		
-	-	5	0	Yes	-	-	-	-	Fore and aft sails	"	N. E.	3	ditto	-	ditto	-	-	"	"	"	"		
-	-	5	0	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	"	"	"	"		
-	-	5	0	"	-	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	"	"	"	"		
-	-	5	0	-	Yes	-	-	-	Fore and aft sails	E. by S.	N. E.	3	None	-	Bow	-	-	All	All	All	All.	An apparent decrease in rolling as the weights below become less.	
-	-	6	0	-	"	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	"	"	"	"		
-	-	3	0	-	"	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	"	"	"	"		
-	-	6	0	-	"	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	"	"	"	"		
-	-	6	0	-	"	-	-	-	ditto	"	"	"	ditto	-	ditto	-	-	"	"	"	"		

E. H. G. Lambert, Captain.

"Pallas," 6 July 1868.

Return of the Performance of the Ship at Sea.

Power of Fighting Guns.	Distribution of Weights.	Dryness.	General Handiness.
The broadside guns have been worked with security, with care, when the ship has been rolling 30° (15° each way). In the after battery ports, and also the foremost ones, when not head to sea, the guns could generally be worked with safety.	Apparently very good; this cruise we had 50 tons of iron ballast, in three lots, on the upper deck, and six tons of shot shifted from the shot lockers and round the lower deck to the tiller compartment, abaft the after ward-room.	Steaming against a sea, the fore-castle and fore part of the main deck is flooded; with wind and sea abeam, the quarter deck and gangway are frequently wet, from the sea striking the indentation, and the spray coming over the bulwarks; the lower deck is a very dry deck.	Under steam I don't think it possible to have a handier vessel; under sail, with a moderate breeze, and pretty smooth water, any evolution might be depended upon.

E. H. G. Lambert, Captain.

TABLE (B.)

ABSTRACT of Return of Rolling of Ships, 5th June 1868.

Force of Wind, 1 to 4.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll. *	Oscillation per Minute. Mean.
			Degrees.	No.
Very slight ahead - -	Minotaur - - -	Under steam - - -	No appreciable motion.	
	Bellerophon - -	Under steam - - -	- - Not taken.	
Long on bow and ahead -	Achilles - - -	Under steam - - -	{ C. Nil. B. I. 1·1 P. Nil.	— 8·5 —
	Warrior - - -	Under steam - - -	{ B. 1·5 P. 1·5 B. I. 1·5 }	8·1
Slight on bow - - -	Royal Oak - - -	Under steam - - -	{ P. 1·9 B. 2·7	6·3 6·3
	Prince Consort - -	Under steam - - -	{ P. 4·5 B. 3·	12· 12·
	Defence - - -	Under steam - - -	- - Not taken.	

ABSTRACT of Return of Rolling of Ships, 6th June 1868.

Force of Wind, 1 to 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Very slight on bow - -	Minotaur - - -	Under steam - - -	No appreciable motion.	
	Bellerophon - -	Under steam - - -	- - Not taken.	
Long ahead - - -	Achilles - - -	Under steam - - -	{ C. Nil. B. I. 1· P. Nil.	— 7·8 —
	Warrior - - -	Under steam - - -	{ B. 1· P. 1·1 B. I. 1· }	7·2
Slight ahead - - -	Royal Oak - - -	Under steam - - -	{ P. 2·4 B. 3·6	6·6 5·9
	Prince Consort - -	Under steam - - -	Little or no rolling.	
	Defence - - -	Under steam - - -	- - Not taken.	

* C. Clinometer.

P. Pendulum.

B. I. Bar Instrument.

B. Batten.

ABSTRACT of Return of Rolling of Ships, 7th June 1868.

Force of Wind, 3 to 6.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight on bow - - -	Minotaur - - -	Under plain sail; wind on the beam.	No appreciable motion.	
Moderate on beam - - -	Bellerophon - - -	Under plain sail; wind on the beam.	{ C. Not moving. P. 2° B. 1°2	20° 9°
Long on beam - - -	Achilles - - -	Under plain sail; wind on the beam.	{ C. 3°4 P. 3°2 B. I. 2°4	7°2 7°4 7°8
Moderate on bow - - -	Warrior - - -	Under plain sail; wind on the beam.	{ B. 2° P. 1°7 B. I. 1°9	11° 11° 11°
Moderate and slight on beam	Royal Oak - - -	Under plain sail; wind on the beam.	{ P. 5°4 B. 7°2	8°8 8°8
Moderate on beam - - -	Prince Consort - - -	Under plain sail; wind on the beam.	{ P. 4° B. 4°1	12° 12°
	Defence - - -	Under plain sail; wind on the beam.	- - Not taken.	

ABSTRACT of Return of Rolling of Ships, 8th June 1868.

Force of Wind, 4 to 6.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight on bow and quarter -	Minotaur - - -	Under plain sail; wind on and abaft the beam.	B. 1°1	8°6
Moderate on quarter - - -	Bellerophon - - -	Under plain sail; wind on and abaft the beam.	{ C. 3°3 P. 3°5 B. 2°5	11°4 12° 8°8
Long on beam and quarter -	Achilles - - -	Under plain sail; wind on and abaft the beam.	{ C. 2°7 P. 2°7 B. I. 2°6	6°7 6°5 6°3
Short on quarter and beam -	Warrior - - -	Under plain sail; wind on and abaft the beam.	{ B. 2°1 P. 2° B. I. 2°3	11° 11° 11°
Slight on beam and quarter -	Royal Oak - - -	Under plain sail; wind on and abaft the beam.	{ P. 8°6 B. 9°5	7°8 7°8
Moderate on beam and quarter	Prince Consort - - -	Under plain sail; wind on and abaft the beam.	{ P. 11°8 B. 10°3	12° 12°
Long on quarter - - -	Defence - - -	Under plain sail; wind on and abaft the beam.	{ P. 8°7 B. 8°8	10° 10°

ABSTRACT of Return of Rolling of Ships, 9th June 1868.

Force of Wind, 2 to 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight - - - - -	Minotaur - - -	Under steam; performing evolu- tions.	- No appreciable motion.	
	Bellerophon -	Under steam; performing evolu- tions.	- - Not taken.	
Long - - - - -	Achilles - - -	Under steam; performing evolu- tions.	{ C. 2.1 P. 1.1 B.I. 1.1	7.1 7.3 8.
Moderate - - - - -	Warrior - - -	Under steam; performing evolu- tions.	{ B. 2.2 P. 2.3 B.I. 2.5	8.6 8.6 8.6
Slight - - - - -	Royal Oak - - -	Under steam; performing evolu- tions.	{ P. 8. B. 8.	7. 7.
	Prince Consort - -	Under steam; performing evolu- tions.	Not taken during the evo- lutions.	
Moderate - - - - -	Defence - - -	Under steam; performing evolu- tions.	{ P. 5.5 B. 6.2	10.4 10.4

ABSTRACT of Return of Rolling of Ships, 10th June 1868.

Force of Wind, 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate and long on beam -	Minotaur - - -	Under plain sail; wind slightly before the beam.	{ P. 8.2 B. 4.3	9.7 8.1
Moderate and long on beam -	Bellerophon - -	Under plain sail; wind slightly before the beam.	{ C. 4.5 P. 8.4 B. 5.4	8.5 8.3 8.2
Long on the beam - - -	Achilles - - -	Under plain sail; wind slightly before the beam.	{ C. 6. P. 6.9 B.I. 5.2	6.9 7.3 7.2
Considerable, and long on beam.	Warrior - - -	Under plain sail; wind slightly before the beam.	{ P. 9.4 B. 9.3	9.4 9.4
Considerable on beam - -	Royal Oak - - -	Under plain sail; wind slightly before the beam.	{ P. 13.9 B. 14.3	9.7 11.6
Moderate, and long on beam -	Prince Consort - -	Under plain sail; wind slightly before the beam.	{ P. 8.9 B. 7.7	9.7 9.8
Long on bow and quarter -	Defence - - -	Under plain sail; wind slightly before the beam.	{ P. 12. B. 11.2	10. 10.

ABSTRACT of Return of Rolling of Ships, 11th June 1868.

Calm.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate on bow - - -	Minotaur - - -	Under steam; performing evolu- tions.	{ P. 5.3 B. 2.2	9.7 8.
Considerable on bow - - -	Bellerophon - - -	Under steam; performing evolu- tions.	{ C. 4.1 P. 5. B. 4.	8.5 9. 8.5
Long on bow - - -	Achilles - - -	Under steam; performing evolu- tions.	{ C. 3.2 P. 4.1 B.I. 2.6	7.1 7.2 7.5
Long on beam - - -	Warrior - - -	Under steam; performing evolu- tions.	{ P. 8.6 B. 8.8	9.8 9.8
Heavy and long on beam -	Royal Oak - - -	Under steam; performing evolu- tions.	{ P. 18.1 B. 19.2	12.5 12.5
Long on beam - - -	Prince Consort - - -	Under steam; performing evolu- tions.	{ P. 12.1 B. 11.1	11.6 11.4
Long on bow - - -	Defence - - -	Under steam; performing evolu- tions.	{ P. 9.5 B. 9.5	10. 10.

ABSTRACT of Return of Rolling of Ships, 12th June 1868.

Calm.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight on bow - - -	Minotaur - - -	Under plain sail - - -	{ P. 4.9 B. 1.4	10. 7.6
Moderate on bow - - -	Bellerophon - - -	Under plain sail - - -	{ C. 2.3 P. 3.5 B. 2.	9.7 10.4 9.
Slight on beam - - -	Achilles - - -	Under plain sail - - -	{ C. 2.2 P. 2.1 B.I. 1.7	7. 7. 7.1
Moderate and long on bow -	Warrior - - -	Under plain sail - - -	{ P. 3.6 B. 3.4	9.7 9.7
Considerable on beam - - -	Royal Oak - - -	Under plain sail - - -	{ P. 15.3 B. 16.6	11.9 11.9
Moderate on beam - - -	Prince Consort - - -	Under plain sail - - -	{ P. 10.5 B. 9.7	11.7 11.6
Moderate on bow - - -	Defence - - -	Under plain sail - - -	{ P. 4.2 B. 4.1	10.4 10.6

ABSTRACT of Return of Rolling of Ships, 13th June 1868.

Calm.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Very slight - - -	Minotaur - - -	Under steam; performing evo- lutions.	Motion scarcely perceptible.	
Moderate - - -	Bellerophon - - -	Under steam; performing evo- lutions.	{C. 2° P. 3°2' B. 2°1'	8°8' 9°5' 7°8'
Slight - - -	Achilles - - -	Under steam; performing evo- lutions.	{C. 2° P. 2°1' B. I. 2°5'	7° 7° 7°2'
Slight - - -	Warrior - - -	Under steam; performing evo- lutions.	{B. 1°9' P. 1°6' B. I. 1°6'	8° 8° 8°
Very Slight - - -	Royal Oak - - -	Under steam; performing evo- lutions.	{P. 3°4' B. 3°1'	5°4' 5°4'
	Prince Consort - - -	Under steam; performing evo- lutions.	Not taken during the evo- lutions.	
No swell - - -	Defence - - -	Under steam; performing evo- lutions.	{P. 2°7' B. 2°7'	8°6' 8°6'

ABSTRACT of Return of Rolling of Ships, 14th June 1868.

Force of Wind, Calm to 2.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Very slight on bow - -	Minotaur - - -	Under plain sail - - -	No appreciable motion.	
Moderate on beam and bow -	Bellerophon - - -	Under plain sail - - -	{C. 1° P. 3° B. 1°2'	8° 9°2' 7°3'
Slight on beam and bow -	Achilles - - -	Under plain sail - - -	{C. Not working. P. 2° B. I. 1°7'	7°7' 7°5'
Slight on beam - - -	Warrior - - -	Under plain sail - - -	{B. 2°5' P. 2°6' B. I. 2°6'	10° 10° 10°
Moderate on beam - - -	Royal Oak - - -	Under plain sail - - -	{P. 10°6' B. 11°6'	9°5' 9°5'
Moderate on beam - - -	Prince Consort - - -	Under plain sail - - -	{P. 9°8' B. 7°4'	12° 11°6'
	Defence - - -	Detached from the squadron.	—	—

ABSTRACT of Return of Rolling of Ships, 15th June 1868.

Force of Wind, 1 to 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Very slight on bow - - -	Minotaur - - -	Under plain sail; wind on the beam.	No appreciable motion.	
Slightly ahead - - -	Bellerophon - - -	Under plain sail; wind on the beam.	- - ditto.	
Slight on bow - - -	Achilles - - -	Under plain sail; wind on the beam.	- - ditto.	
Moderate on bow - - -	Warrior - - -	Under plain sail; wind on the beam.	{ B. 1·7 P. 1·9 B. I. 1·6	9· 9· 9·
Moderate on bow - - -	Royal Oak - - -	Under plain sail; wind on the beam.	{ P. 9·1 B. 9·8	9·3 9·3
Moderate and long on bow -	Prince Consort - - -	Under plain sail; wind on the beam.	{ P. 6·5 B. 5·2	11·3 11·1
	Defence - - -	Detached from the squadron.	—	—

ABSTRACT of Return of Rolling of Ships, 16th June 1868.

Calm.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight; generally on beam -	Minotaur - - -	Under steam; performing evolutions.	No appreciable motion.	
Slight; generally on beam -	Bellerophon - - -	Under steam; performing evolutions.	- - ditto.	
Very slight, generally on beam.	Achilles - - -	Under steam; performing evolutions.	- - ditto.	
Moderate, generally on beam	Warrior - - -	Under steam; performing evolutions.	{ B. 1·8 P. 1·8 B. I. 2·0	5·2 5·2 5·2
Moderate - - - -	Royal Oak - - -	Under steam; performing evolutions.	{ P. 6·9 B. 7·2	8·4 8·
Moderate - - - -	Prince Consort - - -	Under steam; performing evolutions.	{ P. 8·6 B. 6·	11·5 12·
	Defence - - -	Detached from the squadron.	—	—

ABSTRACT of Return of Rolling of Ships, 17th June 1868.

Force of Wind, 4 to 5.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight on quarter - - -	Minotaur - - -	Under plain sail; wind abaft the beam.	No appreciable motion.	
Slight on quarter - - -	Bellerophon - - -	Under plain sail; wind abaft the beam.	{ C. Not moving. P. 2' B. 2'	9.5 8.2
Slight on quarter - - -	Achilles - - -	Under plain sail; wind abaft the beam.	{ C. 1.1 P. 1.5 B.I. 1'	7. 7. 6.2
Short on quarter - - -	Warrior - - -	Under plain sail; wind abaft the beam.	{ B. 1.1 P. .9 B.I. 1.2	9. 9. 9.
Slight, aft. - - -	Royal Oak - - -	Under plain sail; wind abaft the beam.	{ P. 2.7 B. 2.9	5.8 5.8
Short on quarter - - -	Prince Consort - - -	Under plain sail; wind abaft the beam.	{ P. 3.3 B. 2.5	10.4 11.3
	Defence - - -	Detached from the squadron.	—	—

ABSTRACT of Return of Rolling of Ships, 18th June 1868.

Force of Wind, calm to 2.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Very slight on quarter - -	Minotaur - - -	Under plain sail; wind abeam -	No appreciable motion.	
Slight on quarter - - -	Bellerophon - - -	Under plain sail; wind abeam -	{ C. Not moving. P. 1.4 B. 1.1	9. 8.
Slight on beam - - -	Achilles - - -	Under plain sail; wind abeam -	{ C. Not working. P. 1.7 B.I. .9	7.7 7.4
Moderate on beam - - -	Warrior - - -	Under plain sail; wind abeam -	{ B. 1.6 P. 1.6 B.I. 1.5	9.7 9.7 9.7
Slight on quarter and beam -	Royal Oak - - -	Under plain sail; wind abeam -	{ P. 7.4 B. 5.3	8.1 7.7
Moderate on quarter and beam	Prince Consort - - -	Under plain sail; wind abeam -	{ P. 5.1 B. 3.1	11.8 12.
	Defence - - -	Detached from the squadron.	—	—

ABSTRACT of Return of Rolling of Ships, 19th June 1868.

Calm.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Very slight - - -	Minotaur - - -	Under steam; performing evolu- tions.	No motion whatever.	
Very slight - - -	Bellerophon - - -	Under steam; performing evolu- tions.	No motion.	
Slight - - -	Achilles - - -	Under steam; performing evolu- tions.	ditto.	
Short - - -	Warrior - - -	Under steam; performing evolu- tions.	{ B. 1° P. 1° B.I. 1°	9° 9° 9°
Slight - - -	Royal Oak - - -	Under steam; performing evolu- tions.	{ P. 7·9 B. 7·6	9·8 9·6
Moderate - - -	Prince Consort - - -	Under steam; performing evolu- tions.	{ P. 7·2 B. 6·3	11·6 11·6
Moderate - - -	Defence - - -	Under steam; performing evolu- tions.	{ P. 5·3 B. 5·6	10° 10°

ABSTRACT of Return of Rolling of Ships, 20th June 1868.

Force of Wind, 3 to 5.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Slight on bow - - -	Minotaur - - -	Under all plain sail; chasing to windward.	No appreciable motion.	
Slight on bow - - -	Bellerophon - - -	Under all plain sail; chasing to windward.	{ C. Not working. P. 2·4 B. 2·3	11·4 9°
Slight on bow - - -	Achilles - - -	Under all plain sail; chasing to windward.	{ C. 3° P. 3·5 B.I. 3·2	7° 7·5 7°
Short on bow - - -	Warrior - - -	Under all plain sail; chasing to windward.	{ B. 1·5 P. 1·4 B.I. 1·5	9° 9° 9°
Slight on bow - - -	Royal Oak - - -	Under all plain sail; chasing to windward.	{ P. 3·6 B. 3·4	7° 6·8
Short on bow - - -	Prince Consort - - -	Under all plain sail; chasing to windward.	{ P. 3·2 B. 2°	12·3 12°
Moderate on bow - - -	Defence - - -	Under all plain sail; chasing to windward.	{ P. 6·4 B. 6·6	10·4 10·4
Short on bow - - -	Pallas - - -	Under all plain sail; chasing to windward.	{ C. 1·7 P. 2·7 B. 2·5	12° 12° 12°

ABSTRACT of Return of Rolling of Ships, 21st June 1868.

Force of Wind, 2 to 4.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate on bow and beam -	Minotaur - - -	Under plain sail; wind on the beam.	{ P. 3·8 B. ·9	13·1 7·7
Moderate on beam and quarter	Bellerophon - - -	Under plain sail; wind on the beam.	{ C. 1·1 P. 3·4 B. ·9	9·4 11·7 8·1
Short on beam - - -	Achilles - - -	Under plain sail; wind on the beam.	{ C. 2· P. 3· B.I. 2·1	7· 8·3 9·1
Short on bow and beam -	Warrior - - -	Under plain sail; wind on the beam.	{ B. 1·5 P. 1·5 B.I. 1·4	9·8 9·8 9·8
Moderate on beam - - -	Royal Oak - - -	Under plain sail; wind on the beam.	{ P. 7·7 B. 7·7	9·1 9·2
Short on beam - - -	Prince Consort - - -	Under plain sail; wind on the beam.	{ P. 5·7 B. 3·1	13· 12·8
Short on bow - - -	Defence - - -	Under plain sail; wind on the beam.	{ P. 9·4 B. 9·4	10· 10·
Short on bow - - -	Pallas - - -	Under plain sail; wind on the beam.	{ C. 9·2 P. 12·1 B. 13·4	13· 13·2 13·2

ABSTRACT of Return of Rolling of Ships, 22nd June 1868.

Force of Wind, 2 to 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate - - - -	Minotaur - - -	Under steam; performing evolutions.	{ P. 2·5 B. 1·	12·2 8·2
Slight - - - -	Bellerophon - - -	Under steam; performing evolutions.	{ C. Not working. P. 3· B. ·4	10· 9·
Short - - - -	Achilles - - -	Under steam; performing evolutions.	{ C. 1·6 P. 1·8 B.I. 1·4	7·1 7·2 7·1
Long - - - -	Warrior - - -	Under steam; performing evolutions.	{ B. 2·2 P. 2·3 B.I. 2·1	10· 10· 10·
Long - - - -	Royal Oak - - -	Under steam; performing evolutions.	{ P. 13·8 B. 15·4	9·2 9·4
Moderate - - - -	Prince Consort - - -	Under steam; performing evolutions.	{ P. 8·3 B. 6·1	11·7 12·
Moderate - - - -	Defence - - -	Under steam; performing evolutions.	{ P. 4·2 B. 4·4	10· 10·
Moderate - - - -	Pallas - - -	Under steam; performing evolutions.	{ C. 14·5 P. 17·4 B. 17·4	13·7 13·5 13·4

ABSTRACT of Return of Rolling of Ships, 23rd June 1868.

Force of Wind, 4 to 6.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Moderate on bow - - -	Minotaur - - -	Under plain sail; wind on the beam.	{ P. 4.5 B. 1.5	13.6 8.2
Moderate on bow - - -	Bellerophon - - -	Under plain sail; wind on the beam.	{ C. 4.3 P. 6. B. 3.4	10. 10. 8.8
Short on beam - - -	Achilles - - -	Under plain sail; wind on the beam.	{ C. 4.5 P. 4.8 B.I. 4.5	8.5 8.8 7.7
Considerable on bow and beam	Warrior - - -	Under plain sail; wind on the beam.	{ B. 2.3 P. 2.2 B.I. 2.2	10. 10. 10.
Heavy on beam - - -	Royal Oak - - -	Under plain sail; wind on the beam.	{ P. 11.4 B. 10.6	11.8 12.1
Confused short sea on bow -	Prince Consort - - -	Under plain sail; wind on the beam.	{ P. 7.6 B. 5.7	12.6 12.5
Moderate on beam - - -	Defence - - -	Under plain sail; wind on the beam.	{ P. 4.9 B. 4.6	10.6 10.4
Short on bow - - -	Pallas - - -	Under plain sail; wind on the beam.	{ C. 18.3 P. 23.7 B. 23.8	13.8 13.8 13.8

ABSTRACT of Return of Rolling of Ships, 24th June 1868.

Force of Wind, 3 to 4.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Slight on bow - - -	Minotaur - - -	Under plain sail; wind before the beam.	{ P. 1.7 B. 1.2	12.2 7.2
Slight on bow - - -	Bellerophon - - -	Under plain sail; wind before the beam.	{ C. Not working. P. 2.6 B. 2.2	10.6 8.
No swell - - -	Achilles - - -	Under plain sail; wind before the beam.	{ C. 2.8 P. 2.6 B.I. 2.5	7. 6.5 6.1
Moderate on bow - - -	Warrior - - -	Under plain sail; wind before the beam.	{ B. 1.2 P. 1.3 B.I. 1.3	10. 10. 10.
Slight on bow - - -	Royal Oak - - -	Under plain sail; wind before the beam.	{ P. 2.2 B. 3.	6.2 6.2
Moderate and short on bow -	Prince Consort - - -	Under plain sail; wind before the beam.	Little or no rolling.	
Long on bow - - -	Defence - - -	Under plain sail; wind before the beam.	{ P. 2.8 B. 2.7	10.4 12.
No swell - - -	Pallas - - -	Under plain sail; wind before the beam.	{ C. Nil. P. 4.2 B. 3.5	14.7 14.7

ABSTRACT of Return of Rolling of Ships, 25th June 1868.

Force of Wind, 1 to 2.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
No swell - - - -	Minotaur - - -	Under plain sail; wind slightly before the beam.	No perceptible motion.	
No swell - - - -	Bellerophon - - -	Under plain sail; wind slightly before the beam.	- - ditto.	
No swell - - - -	Achilles - - - -	Under plain sail; wind slightly before the beam.	- - ditto.	
Slight on bow - - -	Warrior - - - -	Under plain sail; wind slightly before the beam.	- - ditto.	
Slight on bow - - -	Royal Oak - - - -	Under plain sail; wind slightly before the beam.	- - ditto	
Slight on bow - - -	Prince Consort - -	Under plain sail; wind slightly before the beam.	P. 2'	12'
Moderate on quarter - -	Defence - - - -	Under plain sail; wind slightly before the beam.	P. 2'4	9'4
No swell - - - -	Pallas - - - -	Under plain sail; wind slightly before the beam.	P. 4'1	14'
Horizon obscured by fog.				

ABSTRACT of Return of Rolling of Ships, 26th June 1868.

Calm.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
No swell - - - -	Minotaur - - - -	Under plain sail - - -	No perceptible motion.	
No swell - - - -	Bellerophon - - -	Under plain sail - - -	- - ditto.	
No swell - - - -	Achilles - - - -	Under plain sail - - -	- - ditto.	
Moderate on bow - - -	Warrior - - - -	Under plain sail - - -	P. 1'7	10'
Slight ahead - - - -	Royal Oak - - - -	Under plain sail - - -	P. 5'1	6'8
Moderate on bow - - -	Prince Consort - -	Under plain sail - - -	P. 4'4	11'1
Moderate on quarter - -	Defence - - - -	Under plain sail - - -	P. 2'3	10'
Long ahead - - - -	Pallas - - - -	Under plain sail - - -	{C. 5'7 P. 8'6	15' 15'
Horizon obscured by fog.				

ABSTRACT of Return of Rolling of Ships, 27th June 1868.

Force of Wind, 1.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
No swell - - -	Minotaur - - -	Under steam; performing evolutions.	No appreciable motion.	
Slight - - -	Bellerophon - - -	Under steam; performing evolutions.	{ C. Not working. P. 3' B. 1·7	10· 8·
No swell - - -	Achilles - - -	Under steam; performing evolutions.	No appreciable motion.	
Slight - - -	Warrior - - -	Under steam; performing evolutions.	{ B. 1·7 P. 1·8 B. I. 1·8	10· 10· 10·
Slight - - -	Royal Oak - - -	Under steam; performing evolutions.	{ P. 6· B. 5·	9·2 8·5
Slight - - -	Prince Consort - - -	Under steam; performing evolutions.	{ P. 6·2 B. 6·9	12· 11·
Moderate - - -	Defence - - -	Under steam; performing evolutions.	{ P. 2·1 B. 2·2	10· 10·4
No swell - - -	Pallas - - -	Under steam; performing evolutions.	{ C. 6·1 P. 10·3 B. 11·6	14· 14· 14·

ABSTRACT of Return of Rolling of Ships, 28th June 1868

Force of Wind, 4 to 5.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Moderate on bow - - -	Minotaur - - -	Under plain sail; wind before the beam.	{ P. 3·4 B. 1·1	14·5 8·1
Slight on bow - - -	Bellerophon - - -	Under plain sail; wind before the beam.	{ C. 4·3 P. 5·8 B. 4·2	9·4 10· 8·6
Short on bow - - -	Achilles - - -	Under plain sail; wind before the beam.	{ C. 3·1 P. 3·8 B. I. 3·1	6·8 7· 7·
Considerable on bow - - -	Warrior - - -	Under plain sail; wind before the beam.	{ B. 2·9 P. 2·9 B. I. 2·9	10· 10· 10·
Considerable on bow - - -	Royal Oak - - -	Under plain sail; wind before the beam.	{ P. 4·9 B. 5·3	8·4 8·4
Moderate on bow and beam - - -	Prince Consort - - -	Under plain sail; wind before the beam.	{ P. 5·3 B. 2·7	12·5 11·6
Short on bow - - -	Defence - - -	Under plain sail; wind before the beam.	{ P. 4·8 B. 4·8	10·8 10·2
Short on bow - - -	Pallas - - -	Under plain sail; wind before the beam.	{ C. 11·8 P. 15·8 B. 16·	14· 14· 14·

ABSTRACT of Return of Rolling of Ships, 29th June 1868.

Force of Wind, 5.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Moderate before the beam -	Minotaur - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ P. 2·6 B. 9	16·3 8·
Slight on bow - - -	Bellerophon - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ C. 4·6 P. 5·7 B. 4·4	10·4 11·8 8·3
Short on beam - - -	Achilles - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ C. 5· P. 5·9 B. I. 4·5	6·4 6·9 6·8
Considerable on beam and bow	Warrior - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ B. 3· P. 2·9 B. I. 2·9	10· 10· 10·
Considerable on beam and bow	Royal Oak - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ P. 2·7 B. 2·5	7·5 7·2
Moderate before the beam -	Prince Consort - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ P. 3·6 B. 2·2	13·5 12·2
Short on bow - - -	Defence - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ P. 5· B. 4·9	10·8 10·8
Short on bow - - -	Pallas - - -	Under all plain sail (Royals occasionally taken in); chasing to windward.	{ C. 3·8 P. 4·6 B. 4·1	13· 13· 13·

ABSTRACT of Return of Rolling of Ships, 30th June 1868.

Force of Wind, 3 to 4.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Slight - - - -	Minotaur - - -	Under steam; performing evolutions.	No appreciable motion.	
Slight - - - -	Bellerophon - - -	Under steam; performing evolutions.	- - ditto.	
Short - - - -	Achilles - - -	Under steam; performing evolutions.	- - ditto.	
Considerable - - - -	Warrior - - -	Under steam; performing evolutions.	{ B. 1·3 P. 1·7 B. I. 1·5	9·9 9·9 9·9
Slight - - - -	Royal Oak - - -	Under steam; performing evolutions.	{ P. 3· B. 5·	6· 6·
Moderate and Short - -	Prince Consort - - -	Under steam; performing evolutions.	Little or no rolling.	
Moderate - - - -	Defence - - -	Under steam; performing evolutions.	{ P. 6·2 B. 6·	10· 10·
Short - - - -	Pallas - - -	Under steam; performing evolutions.	{ C. 4·5 P. 6·3 B. 4·8	14·2 14· 14·2

ABSTRACT of Return of Rolling of Ships, 1st July 1868.

Force of Wind, 2.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Slight ahead - - -	Minotaur - - -	Under steam - - -	-	No appreciable motion.
No swell - - -	Bellerophon - - -	Under steam - - -	-	ditto.
Short ahead - - -	Achilles - - -	Under steam - - -	-	ditto.
Moderate ahead - - -	Warrior - - -	Under steam - - -	{ B. 1·6 P. 1·8 B.I. 1·7	10· 10· 10·
Slight ahead - - -	Royal Oak - - -	Under steam - - -	-	No perceptible roll.
Slight ahead - - -	Prince Consort - - -	Under steam - - -	-	Little or no rolling.
	Defence - - -	Under steam - - -	-	Not taken.
	Pallas - - -	Under steam - - -	-	ditto.

ABSTRACT of Return of Rolling of Ships, 2nd July 1868.

Force of Wind, 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			Degrees.	No.
Slight ahead - - -	Minotaur - - -	Under steam - - -	-	No perceptible motion.
No swell - - -	Bellerophon - - -	Under steam - - -	-	ditto.
Short ahead - - -	Achilles - - -	Under steam - - -	-	ditto.
Moderate ahead - - -	Warrior - - -	Under steam - - -	{ B. 2·9 P. 3·4 B.I. 3·3	10· 10· 10·
Slight ahead - - -	Royal Oak - - -	Under steam - - -	{ P. 4·1 B. 4·1	6·2 6·
Slight ahead - - -	Prince Consort - - -	Under steam - - -	{ P. 2·4 B. 2·2	11·4 10·6
	Defence - - -	Under steam - - -	-	Not taken.
Short on bow - - -	Pallas - - -	Under steam - - -	{ C. - Nil. P. 2·6 B. 2·4	14· 14·

ABSTRACT of Return of Rolling of Ships, 3rd July 1868.

Force of Wind, 2 to 3.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight ahead - - -	Minotaur - - -	Under steam; and fore and aft sails.	{ P. 2·1 B. 1·	9·2 8·
Slight on bow - - -	Bellerophon - - -	Under steam; and fore and aft sails.	{ C. Not working. P. 3· B. 2·3	10·7 8·5
No swell - - -	Achilles - - -	Under steam; and fore and aft sails (towing).	{ C. Not working. P. 2·1 B. I. 1·3	6·7 6·
Moderate on bow - - -	Warrior - - -	Under steam; and fore and aft sails (towing).	{ P. 4· B. 3·9	10· 10·
Very slight ahead - - -	Royal Oak - - -	Under steam; and fore and aft sails (being towed).	{ P. 4·4 B. 3·8	6·3 6·2
Slight on bow - - -	Prince Consort - - -	Under steam; and fore and aft sails (being towed).	{ P. 4·5 B. 4·6	10·7 10·3
	Defence - - -	Under steam; and fore and aft sails.	- - Not taken.	
No swell - - -	Pallas - - -	Under steam; and fore and aft sails.	{ C. 2· P. 3·2 B. 3·	14· 14· 14·

ABSTRACT of Return of Rolling of Ships, 4th July 1868.

Force of Wind, 4.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.	Oscillation per Minute. Mean.
			<i>Degrees.</i>	<i>No.</i>
Slight on bow - - -	Minotaur - - -	Under plain sail; wind before the beam.	No appreciable motion.	
Slight on bow - - -	Bellerophon - - -	Under plain sail; wind before the beam.	{ C. 3·1 P. 4·8 B. 3·6	9·8 10·1 8·3
No swell - - -	Achilles - - -	Under plain sail; wind before the beam.	{ C. Not working. P. 2·8 B. I. 3·6	7· 7·
Moderate; and later, considerable on beam.	Warrior - - -	Under plain sail; wind before the beam.	{ B. 9· P. 1· B. I. 1·	10· 10· 10·
Very slight on bow - - -	Royal Oak - - -	Under plain sail; wind before the beam.	{ P. 1·9 B. 2·	5·7 6·
Slight before the beam - - -	Prince Consort - - -	Under plain sail; wind before the beam.	{ P. 2·8 B. 1·9	11·6 11·7
	Defence - - -	Under plain sail; wind before the beam.	- - Not taken.	
	Pallas - - -	Under plain sail; wind before the beam.	- - ditto.	

ABSTRACT of Return of Rolling of Ships, 5th July 1868.

Force of Wind, 3 to 4.

State of the Sea, as recorded by each Ship.	Name.	How Navigating.	Total Mean Roll.		Oscillation per Minute. Mean.
			Degrees.	No.	
Very slight on bow - -	Minotaur - - -	Under plain sail; wind before the beam.	No appreciable motion.		
Very slight on bow - -	Bellerophon - - -	Under plain sail; wind before the beam.	P. 3.5		Not stated.
No swell - - - -	Achilles - - - -	Under plain sail; wind before the beam.	{ C. Not working. P. 3.5 B.I. 3.		6.3 7.
Slight on beam - - -	Warrior - - - -	Under plain sail; wind before the beam.	{ B. 1. P. .8 B.I. .9		9. 9. 9.
Very slight on beam - -	Royal Oak - - - -	Under plain sail; wind before the beam.	{ P. 1.5 B. 1.6		3.9 4.
Very slight before the beam -	Prince Consort - - -	Under plain sail; wind before the beam.	{ P. 1.4 B. 1.4		— Not stated.
	Defence - - - -	Under plain sail; wind before the beam.	- -		Not taken.
	Pallas - - - -	Under plain sail; wind before the beam.	- -		Not taken.

COPY of a Report from Rear Admiral *Warden*, dated 11 July 1868, enclosing LETTERS from Rear Admiral *Ryder* and the Commanding Officers of Her Majesty's Ships in the Channel Squadron, upon the subject of the respective Merits of the various Ships.

(*Admiral Seymour.*)

Ordered, by The House of Commons, to be Printed,
31 July 1868.

[*Price 6 s.*]

500.

Under 2 lbs.

NAVY (COATING OF SHIPS)

RETURN to an Order of the Honourable The House of Commons, dated 26 May 1868 ;—for,

RETURNS “ of the COST each Year during the last Five Years for COMPOSITION for COATING the BOTTOMS of IRON or other SHIPS of HER MAJESTY’S NAVY, and the Rate paid for the same per Registered Ton of Vessel, or per Cent., or whatever way charged :”

“ And, of the Number of SHIPS COATED, the Names of the FIRMS or COMPANIES who supplied the COMPOSITION, and the QUANTITIES furnished by the respective Parties.”

Admiralty, }
24 July 1868. }

N. HOUGHTON,
Pro Chief Clerk.

COST of COMPOSITIONS of all Kinds purchased or made by the Government during the last Five Years.

1863.	1864.	1865.	1866.	1867.
£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
3,128 14 4	4,265 2 11	4,759 12 8	3,293 17 5	3,461 16 -

N.B.—As all the composition made or purchased during the year is not always applied during that year, no rate per ton of bottoms covered can be given.

NUMBER of SHIPS COATED during the last Five Years.

1863.	1864.	1865.	1866.	1867.
No.	No.	No.	No.	No.
42	55	52	54	61

NAMES of the FIRMS or COMPANIES who supplied the COMPOSITION, and the QUANTITIES furnished by the respective Parties during the last Five Years.

NAMES of FIRMS or COMPANIES.	Quantities furnished in									
	1863.		1864.		1865.		1866.		1867.	
	Cwt. qrs. lbs.	Galls.	Cwt. qrs. lbs.	Galls.	Cwt. qrs. lbs.	Galls.	Cwt. qrs. lbs.	Galls.	Cwt. qrs. lbs.	Galls.
Maritime Improvement Company	-	-	-	-	-	2,530	-	5,500	-	12,117½
Messrs. Peacock & Buchan	423 2 5	36	123 0 0	-	77 0 0	-	174 3 4	-	86 0 0	-
Mr. M’Innes	110 3 8	-	15 0 0	-	-	-	-	-	-	-
Mr. Pilcher	-	562	-	-	-	-	-	-	-	-
Mr. Gisborne	-	-	-	-	14 - -	-	-	-	-	-
Mr. Rowett	-	-	-	-	-	204	-	-	-	-
Mr. Mackrell	-	-	-	-	2 2 0	-	-	-	-	-
Messrs. Freeman & Co.	-	-	-	166	-	382	-	394½	-	321½
Captain M’Killop	-	-	2 0 22	8	-	-	-	-	-	-
Government Yards.	-	9,047	-	10,262	-	15,029½	-	2,820½	-	3,080

N.B.—Where quantities are given both by weight and measure, it may be accounted for by the fact that some portion has been supplied by weight and the other by liquid measure.

The following persons also supplied Compositions during the years referred to ; but as they were furnished, at the expense of the inventors, for experimental purposes, the quantities so supplied cannot be stated : viz.—

Mr. Andrews.	Captain Coles.	Mr. Harding.	Sr. Leoni, or Mr. Parkinson.	Mr. Redman.
Mr. Browning.	Mr. Dannatt.	Mr. Hellier.	Mr. Longhein.	Mr. Rumble.
Mr. Bulbeck.	Mr. Finemore.	Mr. James.	Mr. Loverid.	Dr. Sim.
Mr. Castle.	Messrs. Green & Co.	Mr. Jennings.	Messrs. Morewood & Co.	Mr. Welch.
Mr. Crispin.	Mr. Halkett.	Mr. Jouvin.	Mr. Parnell.	

NAVY (COATING OF SHIPS).

RETURNS of the Cost each Year during the last Five Years for Composition for Coating the Bottoms of Iron or other Ships of Her Majesty's NAVY, and the Rate paid for the same per Registered Ton of Vessel, or per Cent, &c.; and, of the Number of Ships Coated, the Names of the Firms or Companies who supplied the Composition, and the Quantities furnished by the respective Parties.

(*Mr. Lush.*)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

NAVY (DESIGNS FOR SHIPS).

RETURN to an Order of the Honourable The House of Commons,
dated 22 November 1867;—for,

COPY “ of the CIRCULAR LETTER of the 15th day of May 1867, sent by the Admiralty to several Shipbuilding Firms, inviting Competitive Plans for Building either a TURRET or a BROADSIDE SHIP, with the REPORTS of the Comptroller and Chief Constructor thereon :”

“ And, RETURN of the Number of DESIGNS of each Class sent in, and the subsequent REPLY of the Admiralty to each Firm, conveying their Decision thereon.”

* Admiralty, }
29 November 1867. }

JOHN HENRY BRIGGS,
Chief Clerk.

(*Mr. Samuda.*)

Ordered, by The House of Commons, to be Printed,
3 December 1867.

CONTENTS.

	PAGE
I.—Copy of the Circular Letter, dated 15th May 1867, addressed by the Secretary of the Admiralty to the under-mentioned Shipbuilding Firms:—	
Messrs. Napier & Sons, Messrs. Palmer, Messrs. Samuda Brothers, Messrs. Laird, the Thames Iron Works Company, the Millwall Iron Works Company, and the London Engineering Company - - -	3
II.—Copy of the Report of the Controller of the Navy on the designs sent in	5
III.—Copy of the Report of the Chief Constructor of the Navy - - -	10
IV.—Return of the Number of Designs of each Class sent in - - -	18
V.—Copies of the Replies of the Secretary of the Admiralty to each of the Firms - - - - -	20

COPY of the CIRCULAR LETTER of the 15th day of May 1867, sent by the Admiralty to several Shipbuilding Firms, inviting Competitive Plans for Building either a TURRET or a BROADSIDE SHIP, with the REPORTS of the Comptroller and Chief Constructor thereon:—And, RETURN of the Number of DESIGNS of each Class sent in, and the Subsequent REPLY of the Admiralty to each Firm, conveying their Decision thereon.

— I. —

COPY of ADMIRALTY LETTER of 15th May 1867, to Messrs. Napier, Messrs. Palmer, Messrs. Samuda, Messrs. Laird, the Thames Iron Works Company, the Millwall Iron Works Company, and the London Engineering Company.

Gentlemen,

Admiralty, 15 May 1867.

I AM commanded by my Lords Commissioners of the Admiralty to acquaint you that they propose to call upon several of the leading shipbuilders in the country, to prepare and submit a design for an iron-clad ship of war; subject to certain conditions, a statement of which is enclosed, for your information and guidance.

My Lords will be glad, should you feel disposed to meet their wishes, to receive from you a design of this nature, either on the turret or broadside principle, as you may yourselves determine.

It is proposed that the several designs should be transmitted to this office by the 15th July next, when they will be referred to the Controller of the Navy, who, before reporting to their Lordships on their respective merits, will communicate, personally, with each designer as to the plan submitted by him, with a view to obtaining a full explanation of all its details; more especially as to its being likely to fulfil the various objects required to be attained.

I am also to observe that, should the design which may ultimately be selected and approved of, be sent in by parties who are in a position to undertake the work, the construction of the ship will be entrusted to their hands, if satisfactory terms can be entered into.

In conclusion, I am to inform you that the substance of the observations of the Controller of the Navy on the designs will be communicated to you, with their Lordships' decision.

I am, &c.
(signed) *Henry G. Lennox.*

CONDITIONS to be observed in designing the Iron-clad Ship proposed to be built for Her Majesty's Service.

1. THE ship to be either on the turret or the broadside principle, at the option of the designer.
2. If a turret ship, she may vary from 3,500 to 3,800 tons; her draught must not exceed 22 feet 6 inches. Turret ship.
3. The turrets must be two in number, each carrying two guns of between 18 and 23 tons in weight.
4. The armour-plating must be at least eight inches thick at and about the water line; the plating round the turrets must be 10 inches thick at the port-holes, and nowhere less than eight inches; it must be at least six inches thick in all other parts, except where the round of the bow and quarter allow of tapering the thickness.

5. It is essential that an all-round fire, either by guns in the turrets or outside of them, should be practicable.

6. The armour plating must extend, at least, five feet below the water line.

7. The height of the guns, in the turrets, above the water, though not defined, is an essential element in the proper use of the ship's armament, and must be carefully considered.

8. A complement of men and officers, amounting to 450, is the least that must be provided for, and provisions, clothes, water, stores, &c., for them, the weight of which will be, at least, 204 tons, must be provided for.

9. The sail power must not be less than 4.4 feet of canvas to every ton of displacement, though any larger power of sail might be admitted.

10. Masts; tripod, or any other form of masts which the designer may prefer, may be proposed.

11. The weight of anchors, cables, boats, warrant officers' stores, must not be less than 140 tons.

12. The weight allowed for artillery, small arms, ammunition, shot, shell, &c., must not be less than 360 tons, and for distilling condensers, cooking galleys, and engineer's stores, not less than 30 tons.

13. The speed of the ship at the load line, to be ascertained by the Government officers, must not be less than $13\frac{1}{2}$ knots.

14. The description of engine, whether single or twin screw, is left for the designer to propose.

15. The coals to be carried must not be less than 450 tons.

16. The accommodation of officers and men, as regards space, air, light, dryness, and readiness of access to the working parts of the ship, and to the turrets, must be thoroughly studied. If artificial ventilation is proposed, it must, together with a system of fire service, additional pumping engines, &c., be allowed for in the weights the ship has to carry.

roadside ship. 17. If, on the other hand, a broadside ship is preferred, the following conditions must be observed.

18. The armament must consist of, at least, 10 nine inch muzzle-loading rifle guns, under the protection of armour plates, six on the main deck, and four on the upper deck; also of two lighter guns, forward and aft, not necessarily under protection.

It is essential the guns on the upper deck should be so arranged, in combination with those of the main deck, that some one gun, under armour plates, shall command every point of the horizon.

19. The armour plating must be of the same thickness as in the turret-ship design, and extended as far below the water line.

20. The tonnage, and draught of water, is not to exceed the limits laid down for the turret ship.

21. The speed to be the same.

22. The complement, the sail power, and the corresponding weights, given for the turret ship, must be carried in the broadside ship.

23. The height of the lower portsill, on the main-deck battery, is not to be less than eight feet; of the upper deck, not less than 16 feet; the distance between the guns, from centre to centre, not less than 17 feet.

turret or broadside ship. 24. Whether a turret or broadside ship is chosen, the vessel must be of iron, with a double bottom; steel, in small proportions, may be proposed.

25. In both designs the screw may be raised, or not, as the designer prefers.

26. The rudder may be a balanced one; the steering apparatus must be capable of placing the rudder at an angle of 38° with the keel.

roadside ship. 27. As in the turret ship, any mode of propulsion may be proposed.

28. As in the turret ship, the utmost consideration must be given to air, light, ventilation, space, and comfortable accommodation for officers and men, and their effects, and in both cases, it is to be understood that only such portion of the weights which the ship must carry has been given, and the designer is quite at liberty to exceed the proportions given, if he thinks it desirable to do so.

29. Any plan of coppering or zincing the bottom of the ship will be entertained.

30. The following drawings should be sent, viz., sheer drawing; mid section; profile; plans; sail drawing.

Specification,

Specification, and such calculations as will enable a judgment to be formed on the design, specifying, particularly, the weight of the hull, and of the armour plating, and backing; the equipment of the ship complete, the height of the centre of gravity, in relation to the meta centre; and the position of the centre of effort of the sails.

31. The design is to be sent in by the 15th July next, addressed to the "Secretary of the Admiralty," with the words, "Design for the construction of an iron-cased ship," in the left-hand corner of the envelope.

NOTE.—*The date on which the designs were to be sent in, was by Admiralty Letter of 11th June, altered from 15th to 29th of July.*

— II. —

(No. 3019.)

COPY of the REPORT of the CONTROLLER of the NAVY on the
DESIGNS sent in.

Designs for a Second class Turret or Broadside Ship.

Controller's Remarks.

Admiralty, S.W., 10 September 1867.

I BEG leave to enclose a Report from the Chief Constructor on the designs for an armour-plated ship of war forwarded by the several private shipbuilding firms, who were asked to send in such designs in compliance with their Lordships' memorandum of the 14th May last.

I should have preferred the arrangement I originally proposed to their Lordships, viz., that these designs should have been referred to some unofficial tribunal, which should have been beyond even the suspicion of partiality, rather than that I should have been called on, in compliance with their Lordships' final directions, to pass an opinion upon plans and drawings which those from whom they emanate will consider somewhat as rival and competitive to designs laid before their Lordships by this Department. But I will endeavour to show the facts of the case with the strictest impartiality, and the final judgment will, of course, rest with their Lordships.

The Report made by the Chief Constructor of the Navy very clearly shows the nature of the several proposals, and the more or less strict compliance with the conditions laid down by the Admiralty as essential to the acceptance of a design.

The first design is that for a broadside ship sent in by the London Engineering Company. I beg leave to refer to the remarks made by the Chief Constructor on this design, page 12.

London Engineering Company's broadside ship of 3,794 tons.

We find a longer and narrower ship, *cæteris paribus*, therefore less handy in manœuvring, especially under sail, a ship deficient in stability, and with some details in construction of a very doubtful character, such as recessed broadside ports. The testimony of all the Brazilian officers is very strongly pointed against the dangers of such constructions, as guiding splinters of all kinds into the ports, and causing great loss of life.

It is only necessary to add that this design, though nominally about the same tonnage as the "Invincible," is in reality one for a larger ship.

The next design is that sent in by the Millwall Company. It is, in some sense, a compound of broadside and turret.

Millwall Company's broadside and turret ship of 3,749 tons.

On referring to page 12 of the Chief Constructor's Report, it will be seen that the design has not sufficient buoyancy to carry the proposed weights by 400 tons.

Messrs. Palmer's
broadside and
movable upper
deck battery ship
of 3,708 tons.

The third design is that sent in by Messrs. Palmer.

It is for a broadside ship, with a movable upper deck battery. This battery, including the armour-plated bulwark, is movable upon rollers, see pages 11 and 12 of the Chief Constructor's Report.

However ingenious this idea may be, I do not believe it would ever be put in practice, or that any ship would be safe at sea with such an arrangement.

Messrs. Napier's
turret ship of
3,774 tons.

The fourth design is that for a turret ship sent in by Messrs. Napier.

The system of construction adopted appears unsafe, especially the lowness of the armour-plated belt, and the want of adequate plating on the deck, which is on the top of that belt, see Chief Constructor's Report, page 14.

Thus, out of seven designs sent in for the consideration of the Admiralty, there are four which have been disposed of.

They are :—

The Broadside design by the London Engineering Company.

The Compound design by the Millwall Company.

The Broadside and Movable upper deck battery design by Messrs. Palmer, and

The Turret design sent in by Messrs. Napier.

There remain three designs which merit serious attention, and which are in themselves practicable, though of various degrees of merit.

These are :—

The Thames Company's design for a Broadside ship.

Messrs. Samuda's design for a Turret ship, and

Messrs. Laird's design, also for a Turret ship.

Thames Company's
broadside ship of
3,793 tons.

I will take the Thames Company's design first; and I beg their Lordships to study most carefully the Report of the Chief Constructor from pages 13 to 14 on this design.

It is for a ship to carry 413 tons, according to the calculation made in this department, and 310 tons according to the Company's calculations, more armour and backing than the "Invincible."

For this increase of weight, only 307 tons of displacement is provided, and there is therefore a serious deficiency in the carrying power of the ship.

It is impossible not to feel grave doubts as to the guarantee offered by the Company that the engines shall work up to eight times their nominal horse power.

We know by experience that six times the nominal power is very difficult to obtain, even under exceptionally favourable circumstances.

According to our calculations, the speed of the ship would not exceed 13½ knots; the Thames Company state it at 15.

I do not hesitate to say that this statement cannot be relied on.

According to our calculations, this design requires a ship with a displacement of 6,310 tons; the "Invincible" only requiring 5,877; the difference between the two amounts represents how much the Thames Company's ship would be larger than the "Invincible."

The ship would have less stability than the "Invincible." The amount of sail is slightly below that required by the Admiralty.

While, therefore, I consider this design a good one, I am satisfied that it has no superiority over that of the "Invincible," which in many features it closely resembles.

Messrs. Samuda's
turret ship of
3,590 tons.

Messrs. Samuda have sent in a design for a turret ship, and it is in some respects a very good design. At the outset, however, it must be said that the conditions

conditions laid down by the Admiralty as to draught of water have been departed from; the ship drawing six inches more than the draught allowed.

I would not allow this deviation (though giving Messrs. Samuda some advantages over their competitors) to be fatal to the consideration of the design.

In other respects the quantity of sail provided is much below the conditions laid down by the Admiralty, and even then our calculations show a serious deficiency of displacement for the weights to be carried; see pages 14 to 15 of the Chief Constructor's Report. The design has been very attentively considered; the great feature of the turret ship proper, the preserving an all-round fire has been well maintained; but the details of construction, the deficiencies I have before adverted to, especially in the spacing and height of the water-tight bulkheads, and the limited length of the double bottom, justify me in coming to the conclusion that this design is in no respect superior to the Admiralty design for a turret ship sent to their Lordships on the 27th July last.

Messrs. Laird have sent in a design for a turret ship. I do not hesitate to say that it is a very excellent design. I think it the best design from private firms which this competition has produced, and I say this, notwithstanding that they have, in the most essential features of the design, not only copied the "Monarch's" arrangements, called by Captain Coles a burlesque on a turret ship, but even placed guns in a position described by Captain Coles when criticising that design, as discarding the chief merits of the turret system.

Messrs. Laird's
turret ship of
3,764 tons.

I have so repeatedly expressed my opinion as to the essential merits and qualities of the turret system of armament that I am loath to repeat it here, but as I still hold that for coast defences, for the attack of fortresses and arsenals, for inland waters, rivers, &c., &c., the turret system of armament, properly designed in vessels known as of the "Monitor" type, is superior to all others, and the most formidable engine of war that can well be conceived; so I still maintain that combining a sea-going ship with masts, rigging, and sails; and this kind of armament entails a sacrifice of a large portion of its efficiency, and compels a choice to be made between serious difficulties, the solution of which in a satisfactory manner has not yet been accomplished.

An all-round fire from two heavy guns in a turret, directed from an armour-plated ship of great speed and handiness, is the most powerful weapon of offence ever conceived, but this can only be thoroughly secured in the "Monitor" type of ship.

The "Monitor" type of ship, though when on a very large scale it can cross the Atlantic, is not, in the proper sense of the word, sea-going, and cannot cruise.

To do as Messrs. Laird have done in the "Captain," and propose to do in this design, and as the Admiralty compelled their designers in 1866, to do in the "Monarch," is in reality to sacrifice the distinctive merit of the turret armament for the sake of obtaining at best an imperfect sea-going cruiser on an enlarged system of training given to broadside fire.

I consider that Messrs. Laird's design (viewing the problem to be solved in that light), would be unexceptionable but for the deficiencies pointed out in the Chief Constructor's Report, *see* pages 15 to 17.

No absolute condemnation of such a design as Messrs. Laird's would be justified because of insufficient displacement, or slightly exaggerated statements of the speed to be realized.

Nevertheless, these deficiencies exist, and detract from the merit of the design.

The lowness of the deck, though absolutely necessary to enable the rest of the design to be executed, is one of the difficulties inseparable from this mode of designing a sea-going turret ship. I cannot but think that in practice it will be found of greater moment than Messrs. Laird suppose.

Giving all due weight to the considerations which influenced Messrs. Laird in their design; to the idea that the ship can be worked under sail upon the hurricane deck, and to the confidence felt that the hurricane deck can and will resist the explosion of the guns, and the strokes of heavy seas, we must insist that a great deal of this confidence is purely speculative, and that evidence that these plans can be worked successfully is wholly wanting.

No doubt the question which will occupy much of their Lordships' attention is whether this design of Messrs. Laird's for a turret sea-going ship is superior to that sent to the Admiralty in July last by their professional designers.

The following considerations occur to me as necessary to be put before their Lordships before any solution can be arrived at:—

The proposed turret ship of Messrs. Laird, by the erection of a poop and forecastle, cuts off the bow and stern fire of the turrets in which are placed those guns whose power is so overwhelming as to leave the ordinary broadside ship at great disadvantages. It obtains, it is true, a large angle of training by using the after-turret to fire forward and the foremost turret to fire aft, and by the extreme measure of firing inside a tripod leg, and using only *one* gun, (a step fraught with risk, and an almost certainty of accident in action,) a very small arc of the horizon is left nominally uncovered.

Now, though in drill this may be done, it is almost certain to lead to a catastrophe if attempted in the heat and smoke of an action, and I should myself not reckon upon commanding, with turrets so arranged, a larger arc than 120° with two guns in each turret, and that slightly interrupted here and there; on this system therefore there remains 60° ; 30° before the beam, and 30° abaft the beam; on each side, not properly commanded by turret fire, and defended only as in a broadside ship. This is still a very powerful arrangement of artillery, and if a thoroughly efficient sea-going cruiser had been obtained by this sacrifice of the distinctive features of the turret armament, might reconcile us to the plan; but, though the sacrifice is evident, the advantages proposed to be obtained are speculative and problematical, and are almost lost when the nearness of the deck to the water is taken into account.

The turret ship designed in the Constructor's Department last July proceeds on entirely opposite principles.

Each turret commands not only 180° , or the whole semicircle, from a line at right angles to the keel round the bow and round the stern (the mast alone obstructing on one point only one gun at a time), but in addition the foremost turret will deliver its fire on a point 50° abaft the beam and the after turret on a point 50° before the beam. The true object of the turret armament is here attained, and the increase of offensive power from the turrets is largely developed.

This development of the offensive power of the ship is obtained by a sacrifice of the advantages derived from the forecastle and the accommodation insured by a poop.

The forecastle gives certain advantages in anchor work, which are, I admit, considerable, but looking at the whole design this one feature will scarcely balance the unfavourable conditions which it has been necessary to couple with it in order to obtain it.

In Messrs. Laird's design the deck is only 7 ft. 6 in. out of the water; in the Admiralty design it varies from 8 ft. 3 in. to 10 ft. 3 in.; the turret ports being in Laird's design $10\frac{1}{2}$ feet, and in the Admiralty design, the foremost 12 feet, the after 11 feet, out of the water.

Instead of a mere hurricane or flying deck, as in Laird's design, the sides of the ship are carried up to the spar deck in the Admiralty design, and the security of the deck and of the ship itself is enormously added to by this arrangement.

I am therefore led to conclude that the true principles of turret armament are better maintained in the Admiralty design than in that of Messrs. Laird, and as the Admiralty design fulfils the conditions laid down, while that of Messrs. Laird, however good and meritorious in many respects, does not do so, I should, if the decision were left with me, adopt the Admiralty design in preference to that of Messrs. Laird, provided their Lordships decided to build a turret ship in preference to a broadside ship.

I may, however, without attempting to influence their Lordships' judgments, say that on the whole, for sea-going purposes, I prefer the "Invincible" to any of these designs for turret or broadside ships.

The particular remarks I wish to make on each design may now be concluded.

I have endeavoured not to repeat what has been put forward by the Chief Constructor, and to point out clearly from what part of his report I have derived my conclusions.

I must, however, make a few general remarks on all these designs in order to throw the greatest possible light on the whole subject. Several of these designs have been objected to on the score of insufficient displacement; that

is,

is, the calculations made in this department show that enough buoyancy has not been given to the several designs to carry the weights which the Admiral conditions required.

In this matter, I can only say that the calculations made in the office appear to me to be quite to be relied on.

The calculated buoyancies of the ships designed in the office are generally correct, if the building of the ship and her equipment are carefully watched, placed in the hands of our own officers, and under a rigid supervision in our own dockyards, of the nature and quantity of the materials used. But we do not find generally that there is anything to spare, and when, as in building ships in private yards, a less vigilant supervision, a less minute direction and inspection necessarily takes place, the calculated displacement constantly proves insufficient; and to obtain the ships at an approximation to their intended load lines, great pinching in coals and equipment is had recourse to.

I may instance the "Black Prince," the "Hector," the "Valiant," the "Agincourt," the "Northumberland," the "Viper," "Vixen," and "Water-witch," built in private yards, as ships all very considerably heavier in the hull than they ought to have been, according to our calculations.

The same error was committed in building the "Achilles," at Chatham Dockyard.

It is almost equally rare to obtain the engines within the stipulated weights; and it is quite certain, from all my experience, that our calculators rather under than over estimate the weights that our ships have to carry.

I think, therefore, that implicit confidence may be placed in them when they report that any proposed design is unequal to carry the weights intended to be put into the ship.

I have also good grounds for reposing the utmost confidence in the calculation they have made respecting the stability of the several ships.

In conclusion, I cannot refrain from pointing out that the competition has failed to elicit anything superior to the designs of the Admiralty's own constructors.

If there had been any want of ability or of technical skill, or even of inventive resource in this department, the present competition must have afforded indications of it by producing designs of obvious superiority.

The fact is, however, that although the very latest official design had been placed in the hands of the competing firms, and although they had the strongest inducements to surpass the official designers if possible, in no one case has a better design than theirs been put forward.

The best of the competing broadside ships is unquestionably that of the Thames Ironworks Company, and its greatest merit consists in its close resemblance to the "Invincible." The departures from her arrangements have, I think, proved fatal to its success. Among the turret ships, Messrs. Laird's is no doubt the best, but the few advantages which it possesses over the official design are either repetitions of the features of other official ships, or else have been purchased at the expense of qualities not less valuable.

There can be but little doubt, I think, that if Messrs. Laird had been content with guns of 18 tons in their turrets, and could have arranged to avoid the introduction of additional guns in a ship of this tonnage, and had given her the benefit of a greater height of deck above water, and of less doubtful arrangements for working the canvas, they would have produced a design which we could have accepted with greater confidence than we could accept the present one. But in that case she would have approximated still more nearly to the designs of our own constructors.

This competition has also clearly established the fact that our constructors have done, and are doing all that can possibly be achieved upon given dimensions in our new ships. There may have been an impression or a fear that they were not designing our second-class iron-clads on the least dimensions possible. But an examination of the present competing designs shows that smaller ships cannot be built to carry the given weights, and to steam at the given speeds, or, what is the same thing, that on the dimensions given in the present case greater weights than our constructors proposed cannot be carried.

Not a single firm proposes, for example, to carry more coals than the "Invincible," or to get the required speed with smaller engines, or to surpass the

proposals of the constructors in any respect whatever, without at the same time increasing the size of the ship (as measured by her displacement); and even with the increases of size proposed, there is evidence to show that in several cases the buoyancy would still be deficient.

As regards structure, the new systems of construction introduced by the present Chief Constructor have been adopted, with scarcely a single exception, both in the armoured and in the unarmoured parts of the hull, by all the competing firms. If better systems could have been devised and put forward they certainly would have been suggested, at least, as alternative proposals.

Another important fact which this competition has established is, that broadside ships, upon the new plan adopted in the "Invincible," are the only ships which really command an unobstructed all-round fire, and that, too, without the use of any shifting bulwarks whatever, or shifting the guns from pivot to pivot, and from a great elevation. No one of the proposed turret ships would possess this. In every case their fire is crossed, embarrassed, and obstructed by masts or rigging, or forecastles and poops, or some other interfering objects; and in all cases the guns are situated much nearer the water than the upper-deck guns of the "Invincible," and involve the use of an enormous extent of turn-down bulwarks, and other troublesome contrivances, which would be perpetual sources of expense, and probably of complaint and condemnation also.

I advert to the foregoing considerations, because I consider it of the greatest importance that the constructors of the Navy should be made to feel that their skill and labour are not lost sight of by their superiors; and for this reason I request their Lordships to make a formal communication to me on the whole subject embraced by these designs, including the Admiralty design for a turret ship.

Messrs. Lawrie's design and sketch does not appear to come within the scope of their Lordships' order, and I will not therefore enter into the consideration of it.

I enclose a tabular statement of various particulars which will assist their Lordships in considering the various qualities of these designs.

(signed) *Robert Spencer Robinson.*

— III. —

COPY of the REPORT of the CHIEF CONSTRUCTOR of the NAVY.

Controller,

Admiralty, S.W., 7 September 1867.

I BEG leave to submit the following remarks upon the designs for iron-clad frigates, sent in by private firms in response to their Lordships' invitations.

They are seven in number, and are submitted by the following firms, three of them being turret ships, three of them broadside, and one of them a combined turret and broadside vessel, viz:—

								<i>Tons.</i>
Messrs. Laird, a turret ship of	-	-	-	-	-	-	-	3,764
„ Samuda - „ -	-	-	-	-	-	-	-	3,590
„ Napier - „ -	-	-	-	-	-	-	-	3,774
Thames Iron Company, a broadside ship of	-	-	-	-	-	-	-	3,793
London Engineering Company „ -	-	-	-	-	-	-	-	3,794
Messrs. Palmer - - - „ -	-	-	-	-	-	-	-	3,708
The Millwall Company, a combined ship of	-	-	-	-	-	-	-	3,749

It will be observed that they are all, therefore, within the limits of tonnage laid down by their Lordships, viz., 3,500 to 3,800 tons, most of the firms approaching the larger limit, Messrs. Samuda's design being the smallest of the seven.

In respect of draught of water, all the firms except Messrs. Samuda keep to their Lordships' limit of 22 feet 6 inches; Messrs. Napier, Palmer, and the

Thames

Thames Company putting the ships down to an even keel at that draught; Messrs. Laird, the Millwall Company, and the London Engineering Company giving their ship a trim of one foot by the stern, making the draught 21'6" forward, 22' 6" aft.; and Messrs. Samuda giving an even keel-draught of 23 feet, which is 6 inches in excess of their Lordships' limit.

All the designers have conformed to their Lordships' conditions in the following respects:—

Armament.

Armour plating.

All-round fire (except where obstructed by shrouds, tripods, &c.).

Depth of armour below water.

Height of ports.

Weight allowed for complement, stores, coals, condensers, &c.; observing, that in no case has any one of the firms provided for carrying more than the prescribed quantity of coals or men.

Most of the firms give somewhat less spread of canvas than was prescribed, owing probably to a misunderstanding as to the sails to be included in the measurement.

Their Lordships ordered 4·4 square feet of canvas to each ton of displacement:

Messrs. Laird give	-	-	-	-	-	-	-	4·08 square feet.
„ Samuda	-	-	-	-	-	-	-	4·46 „
„ Napier	-	-	-	-	-	-	-	3·56 „
The Thames Company	-	-	-	-	-	-	-	4·15 „
London Engineering Company	-	-	-	-	-	-	-	4·4 „
Messrs. Palmer	-	-	-	-	-	-	-	4·19 „
The Millwall Company	-	-	-	-	-	-	-	4·39 „

Some of the firms do not allow nearly sufficient weight for the masts, rigging, and sails, the Admiralty weight ("Invincible's") being 158 tons, and the weight allowed being—

Messrs. Laird	-	-	-	-	-	-	-	-	130 tons.
„ Samuda	-	-	-	-	-	-	-	-	85 „
„ Napier	-	-	-	-	-	-	-	-	108 „
Thames Company	-	-	-	-	-	-	-	-	200 „
London Engineering Company	-	-	-	-	-	-	-	-	158 „
Messrs. Palmer	-	-	-	-	-	-	-	-	158 „ (say).
Millwall Company	-	-	-	-	-	-	-	-	140 „

from which it will be seen that Messrs. Laird are considerably, and Messrs. Samuda extremely deficient in this respect.

I have now to consider the merits of the respective designs in succession.

Messrs. Palmer's Design.

I mention this design first, because it contains the most novel and remarkable feature of the whole. It consists in mounting the entire upper deck battery, resembling that of the "Invincible," upon rollers, for the purpose of projecting either side of it beyond the general side of the ship, when it is necessary to fire ahead or astern, or rather of withdrawing it within the ship when such fire is not necessary.

In its general features, this design very closely resembles that of the "Invincible." It is of exactly the same length, and one foot less in breadth, the reduction in breadth being disadvantageous, because the "Invincible" has only just enough beam to enable her to receive her double engines (for the

double screw), and to stand up under the pressure of her canvas. It is true that the spread of canvas proposed is somewhat less than the "Invincible's," but that is in disregard of the conditions laid down, and as the displacement of Messrs. Palmer's ship somewhat exceeds that of the "Invincible," she would no doubt have less speed under canvas than that ship.

The general construction of the hull is the same as the "Invincible's" and is unobjectionable.

The adoption of the movable upper deck battery is objectionable in several ways.

1st. The placing of so enormous a weight as that of each half of the upper deck battery, with all its framing, backing, armour, guns, and other appliances, upon rollers, for the mere purpose of withdrawing it towards the centre of the ship when fore and aft fire is not required, appears to be both an unnecessary and a doubtful arrangement, and likely to prove very dangerous when the ship rolls.

2ndly. Every movable battery of this kind is liable to be jammed and put out of order by shot.

3rdly. The gearing for working the battery would be in the way of the main-deck guns.

4thly. The deck beneath the upper-deck guns, when run out, would be too weak; and

5thly. The plan involves so great an interference with the continuity of the upper-deck plating as to be seriously objectionable in a structural point of view.

Some of the minor details of this design, where the arrangements of the "Invincible's" hull are departed from, are such as I could not sanction.

The Millwall Company's Design.

This design also has some very novel features, consisting mainly in the employment upon the upper deck of a turret in combination with a fixed battery; a combination which is associated with, or rather, is secured by means of, a device which at once condemns the design, viz., the proposal to employ greater weights than the ship would carry.

The total weight which the designer proposes to carry exceeds the displacement or buoyancy by nearly 400 tons. This design is, in other respects, very imperfectly worked out, and is as unsightly as it is faulty. In the dimensions, in the proposed method of constructing the double bottom, and in the accommodation suggested, it is nearly a copy of the "Invincible."

London Engineering Company's Design.

This design resembles the "Invincible" in many respects, but differs from her in many others.

She resembles her in respect of general construction, upper-deck battery and armament, and internal arrangements, but differs from her in dimensions and displacement, in having four guns on each side instead of three, in having recessed broadside ports, and in having the extreme ports on the main-deck recessed, and the sides of the ship indented there as well as on the upper deck, in order to train the guns within 10 degrees of a fore and aft line.

The additional armament and armour can only be given, of course, by means of an increased displacement, and consequently this design has a displacement of 201 tons beyond that of the "Invincible." To secure this on the same dimensions would, of course, involve fuller lines and loss of speed; but in this case the length has been increased, and breadth diminished, and consequently no considerable loss of speed would probably result.

The length is 295 feet (15 feet more than "Invincible"), and the breadth 52 feet (two feet less than "Invincible"). The question arises whether these changes are permissible. The Assistant Constructors concur with me in believing them to be improper. In passing from the "Bellerophon" to the "Captain," Messrs. Laird made a precisely similar change, only to find afterwards that they had made

made the ship too narrow for the engines, and had to sink the latter into the double bottom. A like result would probably follow in this case: but the changes in question are open to a much more serious objection, viz., the consequent loss of the necessary stability for carrying the proposed spread of canvas.

In the "Invincible" and in this ship we are to have a larger spread of canvas than is usual in iron-clads, and in order to carry this, we found it necessary, after much investigation, to fix upon the dimensions adopted in our ship. In the new design now under notice, this consideration appears to have been lost sight of, or insufficiently regarded, and the stability has been greatly cut down.

The metacentre is only $4\frac{1}{2}$ inches above the loadwater line, and as, under the most favourable view of the case, the centre of gravity would not be more than 1·9 feet below that line, it follows that the metacentre would be only $2\frac{1}{2}$ feet above the centre of gravity. In the "Achilles," which is the least stable of the iron-clads for her size, this distance is three feet; and while the "Achilles" is carrying but 3·2 square feet of canvas to the ton of displacement, this ship is intended to carry 4·4 square feet per ton. In brief, we went in the "Invincible" as far as we thought we could prudently venture to go, in reducing the proportion of the stability to the sail power, and we strongly object to going the length which this design proposes in this respect.

It appears unnecessary, therefore, to discuss the details of the plans, especially as the recessed ports have formed the subject of former reports to their Lordships.

It may, however, be worth while to remark, that space round the foremost capstan, and the spread of the rigging are both less than we find it necessary to give.

The Thames Company's Design.

This design very closely resembles that of the "Invincible," having the same general arrangement of armour and armament; but by increasing the length of the ship, the length of the battery, the breadth of the belt, and the thickness of the strake above water, and completing the upper deck bulkheads, the Company have added, according to their own estimate, 310 tons to the armour and backing, and, according to our estimate, 413 tons. They have increased the displacement 307 tons, leaving a deficiency, according to our calculations, of more than 100 tons.

This design is also open to the same kind of objection as that last considered, but in a less degree, the length being increased 10 feet, and the breadth diminished one foot, as compared with "Invincible." The proposed sail-power is 4·15 square feet per ton of displacement; somewhat less than that prescribed.

The armour-plate side in wake of main deck is slightly curved to provide for increasing the fore and aft training of the broadside guns at the ends of the battery, at the expense of the training in the opposite direction.

The working of the ship would no doubt be much obstructed by the existence of the armour-plated bulkheads extending right across the upper deck.

With so great an addition to her displacement, this ship would no doubt be slower with a given power than the "Invincible," notwithstanding the increase in her length. The Company, however, offer to guarantee that eight times the nominal engine power shall be exerted by the engines, and they promise that this will secure a speed of 15 knots.

So large a development of power probably would secure a speed, according to our calculations, of about $14\frac{1}{2}$ knots, and the Company offer to guarantee this power with the same weight of engines, boilers, &c. This offer is certainly a very important one, but should, I think, be considered apart from the design of the ship, as it is the power of a new style of patent engine, and not the speed of the ship, which they offer to guarantee.

Considering the excess of the weight above the displacement in this ship, the certain loss of speed with a given engine-power, the obstruction of the upper deck, the deficiency of the sail power, and probable deficiency of stability, and the absence of any feature which has not already been well and carefully

considered by us during the design of the "Invincible," I am not prepared to pronounce the proposed design as more satisfactory than, or equally satisfactory with, the Admiralty design.

I come now to the consideration of the designs for turret ships.

Messrs. Napier's Design.

Messrs. Napier propose a turret ship of exactly the same dimensions and tonnage as the "Invincible," but with a mean draught of water equal to "Invincible's" extreme draught, viz. 22' 6", and a corresponding increase in section and displacement. They give her two turrets, each carrying two 18-ton guns. The general arrangement of the armour and turrets is like that of the "Affondatore," the armour on the sides forming only a shallow belt, three feet above and five feet below the water, the deck at the height of the top of the belt being only half an inch thick (of steel). The bases of the turrets are surrounded by armour-plated circular bulkheads, which leave little or no space between them and the turrets. The central spindles round which the turrets revolve are placed in the middle of hatchways. The turrets themselves are weakly designed, having no horizontal frames whatever. The whole of the turret arrangements of this design appear to have been but imperfectly considered, and certainly could not be sanctioned. A good height of upper deck and of ports is given by the system of construction adopted, but it is at the same time attended by the disadvantage of bringing the tops of all the water-tight bulkheads within three feet of the water's surface.

Messrs. Samuda's Design.

Messrs. Samuda's design is for a real turret ship, with all-round fire (except some minor interruptions), plated throughout to the upper deck, and having a deck house enclosing the engine and boiler hatches between the funnels. The ship is 20 feet longer than the "Invincible," and 3 ft. 8 in. narrower; these dimensions giving a tonnage of 3,590 tons, as stated by the designers, but of 3,531 tons, as calculated here; about 200 tons less than the "Invincible." The draught of water proposed exceeds by six inches the limit laid down by the Admiralty, being 23 feet fore and aft. Messrs. Samuda state that the excess may be reduced to three inches, by supplying the vessel with 270 tons of armament and ammunition, instead of the 360 tons, which they have provided for as directed. It appears to me, however, that the ship would not carry her weights even with the diminished weight of artillery and ammunition, and at the 23 feet draught. In the "Invincible" we have estimated the weight of masts, yards, rigging, sails, &c., at 158 tons. Messrs. Samuda only allow 85 tons for the same things, which would be very deficient, even if their proposal to fit the lighter rig, shown in Sail Drawing B, which gives only about $2\frac{3}{4}$ square feet of sail per ton of displacement, were adopted. We also consider that they have allowed about 10 tons too little for the turrets; and they have allowed nothing for auxiliary engines, for which we have considered it desirable to allow 25 tons in our designs. Our calculations also go to show that the weight allowed for hull is about 17 tons less than we think necessary; the weight for armour, 30 tons; and the weight for backing, 20 tons. In these calculations we do not include the conning tower shown, for which we require 50 tons more. On the whole, our investigations, carried out in the usual manner, indicate a total deficiency of 225 tons in the displacement of the ship, even at the 23 feet draught, presuming that the prescribed weight of guns, shot and shell, powder, &c., is adhered to.

There is some reason to apprehend that in this case also, as in that of the London Engineering Company, the reduction of beam is attended by too great a loss of stability. We find the metacentre to be at a height of 74 of a foot only above the water-line and although this is more than in the other case, while the centre of gravity is no doubt lower, the stability nevertheless appears small. Messrs. Samuda have shown a centre of gravity which, if correct, would leave no doubt

on

on the point ; but their centre is lower than we should expect to find it. We can settle the question by an elaborate calculation, if it is thought necessary to do so, but it is a calculation that will require time. There is, however, a defect in the design as it now stands, which requires more urgent consideration, viz., the employment of a system of water-tight bulkheads, which stop at a height of about 18 inches above the water line. This feature would have been objectionable, even if it had been associated with as extended a double bottom as the "Invincible" possesses ; but in this case the double bottom extends only through the length of ship occupied by the engines and boilers, viz., 124 feet out of 300 feet ; whereas, in the "Invincible," we have a double bottom 184 feet long, out of 280 feet, and our bulkheads nowhere rise less than four feet above the water. The effect of the arrangement adopted in the design of the ship now under consideration would be, that any injury done to the bottom, before the boilers or abaft the engines, by taking the ground, collision, or otherwise, if it resulted in more leakage than the pumps could keep under, would sink the ship, for there is no compartment there out of which the water would not flow freely over the lower deck into all parts of the ship. In fact, where there is no double bottom, the ship may almost as well be without bulkheads altogether, as have them stopped a few inches above the water-line. It is just possible that the extreme aftermost and foremost bulkheads might be useful in this ship ; but there is certainly a space 100 feet long forward, and 55 feet long abaft, where the ship is practically without water-tight divisions.

There are minor defects in the design, such as deficiency of cabin accommodation, and stowage for powder in the magazines ; and it is also open to the much more serious objection, that this ship, of 3,500 tons, would have to be worked under canvas upon a deck only $9\frac{1}{2}$ feet above the sea level.

Messrs. Laird's Design.

This is in many respects a remarkably good design for a sea-going turret ship of that class in which the turret guns are used for broadside purposes only, but with the capability of training through large arcs, chase fire ahead being secured by means of bow-guns placed behind a fixed armour-plated breastwork or shield forward, as in the "Monarch," and another aft. A fore-castle, a poop, and a narrow central deck-house are proposed, as in the "Captain," the fore-castle and poop being connected by a bridge 23 feet wide, clear of the hammock netting and framing. The fore-castle is high, and two-decked, a device which I ventured for certain reasons to adopt in the large broadside iron-clad frigate, which was submitted to you and to their Lordships a year ago. In the present case it is associated with a sloping break in the upper or working fore-castle deck, where it joins the over-turret bridge.

I observe with satisfaction that Messrs. Laird have preserved in this ship very nearly the same beam as the "Captain" has, although the length is much less. The "Invincible" is 280 feet long, and 54 broad ; and this ship is 290 long, and 53 broad, this slight change in proportion being unobjectionable in the present case, as the weights of the armour and turrets are comparatively low. The tonnage only differs from the "Invincible's" by less than 10 tons, and the draught of water is identical with hers. The displacement has had to be increased, however, by 195 tons, and even this increase leaves a deficiency, according to our calculations, of about 54 tons. Adding the margin of 22 tons, which we have allowed to the "Invincible" for unexpected increases of weight, unquestionably a sufficiently small allowance, and we have a deficiency of 76 tons. Messrs. Laird conform to the weight of armament and ammunition laid down in the Admiralty letter, but as their design involves the use of four 600-pounders, and three 7-ton guns, it would be necessary (in conforming to the table of weights supplied by the Director General of Naval Ordnance, upon which we base all our new ships) to provide 421 tons for guns, ammunition, &c. I have taken the greater weight in making our calculations. To provide for the additional 76 tons, it would be requisite to make a total increase of displacement of 271 tons beyond the "Invincible's." All this involves, of course, a somewhat larger and heavier submerged hull, which would demand a still further increase of displacement.

Viewing the design, therefore, from the same point of view, and with the same sense of responsibility that I should view a design of my own, I cannot help stating that I do not consider that the proposed ship would satisfactorily carry the weights intended for her, nor do I consider that those weights would themselves be sufficient to give thorough satisfaction to the Gunnery Department of the Admiralty, seeing that so much of the 360 tons allowed would be required for the guns, with their slides, carriages, &c., and so little would be left for powder, shot, and shell.

An additional immersion of less than three inches would, however, provide for carrying the additional weights; this would add about 10 square feet to the section of the ship, and, say, 75 tons to her displacement, thus making her section exactly the same as "Invincible's," and her displacement 270 tons more. With the same power, therefore, the speed of this ship would be less than "Invincible's," as her load-water lines would be, and are fuller, and her weight so much more.

I hope too much importance will not be attached to the foregoing considerations, especially where there is much that is excellent in the general design of the ship. The deficiencies of weight and speed involved (especially of the latter) are not large; but it is nevertheless my duty to point out clearly that in seeking to do the very utmost upon the tonnage of the "Invincible," and to submit the most powerful ship possible under the proposed conditions, Messrs. Laird have, in my opinion, undertaken somewhat more than their Lordships could with confidence rely upon.

There are three important features of the design which require special consideration;

First. The height of the turrets and guns above water.

Secondly. The necessity of working under canvas this full-rigged frigate upon a deck which, for the greater part of its length, is only 23 feet broad, and which leads to the fore-castle deck up a sloping and tapering break; and,

Thirdly. The necessity of firing 600-pounder guns beneath a flying deck, and past narrow tapering deck-houses.

On the first point it will be sufficient to say that the height of side above water given to this ship is 7 feet 6 inches, measuring to the top of the wooden deck plank, a less height than the main deck port-sills of the "Invincible." The turret port-sills, however, are kept well up above the deck, and are 10 feet 6 inches above water. The bow chasers have 18 feet port-sills, and the stern-chaser an 11-foot sill. This ship would therefore possess, like the "Monarch," an excellent chasing battery, in so far as height above the water is concerned.

It is much to be feared, however, that the lowness of the upper deck (7½ feet above water) would prove in practice very unsatisfactory. In proportion to the side of the ship, it is as low as the "Scorpion's" and "Wyvern's" and even in moderate seas would no doubt be completely swamped. It must be borne in mind that although the engine and boiler hatches are carried up to the flying deck above, it is through this low deck that the turrets pass, and round them that the open space must exist.

With regard to the second question, the practicability of working the sails, &c., of this large ship upon a deck 23 feet broad, of which the centre is occupied by large hatches, and on which boom-boats have to be carried, I beg leave to be excused from offering a confident opinion. Certainly we have not a particle of evidence that such an arrangement would be viewed with satisfaction by naval officers generally; and I should be apprehensive that, if adopted, the plan might be hereafter pronounced a failure. It will be tried in the "Captain;" and I consider that one ship of 4,000 tons would be sufficient to build in that way at present.

With regard to the third point, I must say that I have grave doubts whether it will be found practicable to make the proposed bridges and deck-houses of this ship and of the "Captain" strong enough to withstand the explosion of two 600-pounders simultaneously, or even of one of them, without resorting to materials of such strength and weight as have not been allowed for in the designs. I believe it is quite practicable to make the sides and decks of a

vessel

vessel strong enough to fire even these large guns, past, or over, or under, as the case may be, provided that the main frames, and beams and plating of the ship are made available for giving strength to them ; but I do not believe that comparatively light and narrow deck-houses, erected on the middle of the deck, or comparatively unsupported bridges, can be made to do so, except by the use of enormous quantities of iron frames and plating.

In general construction the hull is like that of the "Bellerophon," but has fewer water-tight divisions than I like, and comprises a number of small changes which it would appear litigious to find fault with in detail, but which are nevertheless such imperfections as we feel it our duty to avoid in designing Her Majesty's ships.

On the whole, the investigation which I have made of this design, has shown that it is by far the best offered of a sea-going turret ship that their Lordships' invitations have elicited, and although many Admiralty plans and several inventions of my own are reproduced in it, I am of opinion that Messrs. Laird deserve great credit and the thanks of their Lordships for preparing and submitting such a design.

I deem it no part of my present duty to compare either of the present designs with the design of a turret ship of the same dimensions which I submitted a few weeks ago. I will, therefore, only say on that head, that both as a sea-going ship and as a fighting ship, I think that design deserves careful consideration, because it provides a fine long and roomy upper deck of the full width of the ship throughout her middle portion for working the ship upon, and because provision is made for giving the turret guns that power which used to be represented as their most distinctive merit, viz., that of being brought upon an enemy situated in any direction, and of being kept steadily upon him all round either the bow or the stern, however much either of the fighting ships may shift position. It also provides for combining the attack of the ship's heavy guns with the ram attack ; and I believe that in attacking a line of battle, this steady command of the enemy with your heavy guns while you approach, with the power of keeping the same guns upon him as you break the line, would give the turret ship her one great superiority to the broadside ship.

MR. LAWRIE'S DESIGN.

In addition to the foregoing designs, Mr. Lawrie, of the Clyde, President of the Scottish Shipbuilders Association, forwarded on the 5th of August a rough model and a midship section of the ship, which he would advise the Admiralty to build. This ship is to be built with iron frames and wooden plank, and has a stout belt of armour imbedded in her at the water-line. She has also a fixed turret to carry four 600-pounders, and is fitted with turned down bulwarks.

It is unnecessary to dwell upon the qualities of this design further than to say that the ship if built would be exceedingly deficient in stability, refusing to stand up under canvas ; that in order to enable her to carry her weights, her lines would have to be made very full ; and that instead of steaming 15 knots, as Mr. Lawrie promises, she would not steam 14 or much more than 13. I would recommend that he be informed that their Lordships thank him for his communication, but are not prepared to build such a ship as he proposes.

(signed) *E. J. Reed.*

— IV. —

RETURN of the Number of DESIGNS of Each Class Sent In.

PARTICULARS.	London Engineering Company.		Laird Brothers.		Thames Iron Company.		Millwall Iron Works.	
	Broadside.		Turret Ship.		Broadside.		Broadside and Turret.	
	<i>Ft.</i>	<i>in.</i>	<i>Ft.</i>	<i>in.</i>	<i>Ft.</i>	<i>in.</i>	<i>Ft.</i>	<i>in.</i>
Length between the perpendiculars - - -	295	0	290	0	290	0	285	0
„ of keel for tonnage - - - - -	259	6½	255	3½	253	10½	250	7
Breadth extreme - - - - -	52	0	53	0	53	0	53	0
„ for tonnage - - - - -	52	0	52	9	53	0	53	0
Depth in hold - - - - -	24	1	17	6	17	3	15	11
Burthen in tons - - - - -	As Stated. 3,794½	As Calculated. 3,747½	As Stated. 3,764½	As Calculated. 3,778½	As Stated. 3,793½	As Calculated. 3,793½	As Stated. 3,749	As Calculated. 3,743½
Draught of water { Forward - - - - -	21	6	21	6	22	6	21	6
„ { Aft - - - - -	22	6	22	6			22	6
Displacement in tons - - - - -	6,100		6,094		6,206		5,780	
Area of midship section in square feet - -	1,022		1,040.6		1,044		1,050	
Area of sails in square feet - - - - -	26,857		24,889		25,801		25,352	
Square feet of sail to 1 ton of displacement -	4.4		4.08		4.15		4.39	
Height of port sill above load water line - { Main deck 8 ft. {	Upper „ 17 „ {		Turret 10½ ft. {		Main deck 8 ft. {		Main deck 8 ft. {	
Distance between ports (centre to centre) -								
	17 ft. and 18 ft.		Bow 18 „ {		Upper „ 16 ft. 8 in. {		Upper dk. broadside 16 „ 3 in. {	
			Stern 11 „ {		17 ft. 3 in.		Turret 14 „ 6 „ {	
Number, position, and size of guns - {	Main deck 8 12-ton. {		4 600-pndrs. in turrets {		Main deck 6 12-ton. {		Main deck 6 12-ton {	
	Upper „ { 4 12-ton. {		2 6½-ton guns, or 1 12-ton gun at bow, & 1 6½-ton gun at stern.		Upper „ { 4 12 „ {		Upper { 2 12-ton broadside. {	
	2 64-cwt.				2 64 pndrs.		deck { 2 12 „ turret.	
Horse power of engines - - - - -	800 working to		800 working to		800 working to 4,800		800 working to 4,800	
Speed in knots per hour - - - - -	As Stated. 13½	As Estimated. 13.53	As Stated. 13½	As Estimated. 13.49	As Stated. 15	As Estimated. 13.41	As Stated. 13½	As Estimated. 13.34
					14.76 if J. P. is taken at 6,400.		Engines proposed to work up to 5,000.	
Number of tons of coal - - - - -	450		450		450		450	
Complement of men - - - - -	450		450		450		450	
Thickness of armour - - - - -	8 in. at W. L.; 6 in. elsewhere.		8 in. at W. L.; 6 in. elsewhere; 8 in. and 10 in. on turrets.		8 in. at W. L.; 7 in. for 1 strake above, and 6 in. elsewhere.		8 in. at W. L.; 6 in. elsewhere; 8 in. and 10 in. on turrets.	
Thickness of backing - - - - -	10 in.		10 in.		10 in.		10 in.	
Depth of armour below L. W. L. - - -	5 ft.		5 ft.		5 ft.		5 ft.	
Height „ above „ on belt - - -	4½ „		7 „		5½ „		5 „	
Thickness of plating behind armour - -	1½ in.		1½ in.		1½ in.		1½ in.	
„ „ on decks - - - - -	¼ in. steel on upper deck; ⅝ in. steel on main deck.		¾ in. thick amidships; 1 in. at turrets; 1½ in. at ends on upper deck.		¼ in. steel on upper deck; ⅝ in. steel on main deck.		¼ in. steel on upper deck; ⅝ in. steel on main deck.	
	As Stated.	As Estimated.	As Stated.	As Estimated.	As Stated.	As Estimated.	As Stated.	As Estimated.
	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
Weight of water, provisions, spirits, and officers' stores, &c. - - - - -	204	204	204	204	204	204	204	204
„ masts, yards, rigging, blocks, and sails. - - - - -	158	158	130	158	200	158	140	158
„ cables, anchors, boats, and war-rant's stores. - - - - -	147	140	140	140	140	140	140	140
„ armament (total) - - - - -	407	414	420	420	360	360	360	360
„ turrets (without guns and carriages), if any. - - - - -	-	-	360	421	-	-	180	180
„ engineer's stores, galley, and condensers. - - - - -	30		30	30	50	30	30	30
„ engines, boilers, and water - - -	753	800	800	800	790	800	800	800
„ auxiliary engines - - - - -	25		30	25	-	25	80	25
„ coals - - - - -	450	450	450	450	450	450	450	450
TOTAL weight of equipment - - -	2,124	2,221	2,564	2,648	2,194	2,167	2,384	2,347
Weight of hull - - - - -	2,764	2,764	2,430	2,430	2,700	2,740	3,396	2,700
„ armour on sides and bulkheads -	1,020	970	920	920	1,300	1,203		960
„ backing „ „ „ „ -	160	160	150	150		200		168
„ conning tower (if any) - - -	none	none	none	none	none	none	none	none
TOTAL weight when complete for sea	6,077	6,124	6,064	6,148	6,194	6,310	5,780	6,175
Deficiency or excess of displacement to constructed line - - - - -	23 excess	24 deficiency	30 excess	54 deficiency	12 excess	104 deficiency	-	395 deficiency

— IV. —

RETURN of the Number of DESIGNS of Each Class Sent In.

Messrs. Samuda.		Messrs. Napier.		Messrs. Palmer.		Admiralty.		J. G. Lawrie.	
Turret Ship.		Turret Ship.		Broadside.		Broadside.		Turret.	
<i>Ft. in.</i>		<i>Ft. in.</i>		<i>Ft. in.</i>		<i>Ft. in.</i>		<i>Ft. in.</i>	
300 0		280 0		280 0		280 0		250 0	
265 6 $\frac{3}{4}$		244 5		255 0 $\frac{1}{4}$		—		—	
50 4		54 0		53 0		54 0		45 0	
50 0		54 0		53 0		—		—	
22 4		22 6		— — —		24 1		18 2	
As Stated. As Calculated.		As Stated. As Calculated.		As Stated. As Calculated.		As Stated. As Calculated.		As Stated. As Calculated.	
3,590 $\frac{1}{2}$ — 3,531 $\frac{3}{4}$		3,774 $\frac{1}{2}$ — 3,791 $\frac{3}{4}$		3,708 $\frac{1}{2}$ — 3,660 $\frac{3}{4}$		3,774 $\frac{1}{2}$ — 3,774 $\frac{1}{2}$		2,401 $\frac{3}{4}$ —	
23 0		22 6		22 6		21 6		22 6	
6,012		5,963		5,965		5,899		5,947	
997.5		1,080		1,043		1,067		1,067	
Sketch A. 26,852		21,250		24,992		25,813		25,813	
" B. 16,613		3.56		4.19		4.4		4.4	
" A. 4.46									
" B. 2.76									
12 ft. 6 in.		13 ft. 6 in.		Main deck 8 ft. Upper " 16 "		Main deck 8 ft. Upper " 16 ft. 6 in.		Fore turret 12 ft. After " 11 " Spar deck over 20 "	
— — —		— — —		17 ft.		17 ft.		—	
4 600-pndr. in turrets		4 18 ton guns in turrets		Main deck 6 12-ton. Upper " 4 12 " " 4 64-pndrs.		Main deck 6 12-ton. Upper " 4 12 " " 4 64-pndrs.		4 18-ton guns in turrets. 4 64-pndrs. on spar deck.	
800 working to 4,800		800 working to 4,800		800 working to 4,800		800 working to 4,800		800 working to 4,800	
As Stated. As Estimated.		As Stated. As Estimated.		As Estimated.		As Estimated.		As Estimated.	
13 $\frac{1}{2}$ — 13.5		13 $\frac{1}{2}$ — 13.53		13.5		13 $\frac{1}{2}$		13 $\frac{1}{2}$	
450		450		450		450		450	
450		450		450		450		450	
8 in. at W. L.; 6 in. elsewhere; 8 in. and 10 in. on turrets.		8 in. at W. L.; 6 in. elsewhere; 8 in. and 10 in. on turrets.		8 in. at W. L.; 6 in. elsewhere.		8 in. at W. L.; 6 in. elsewhere.		8 in. at W. L.; 7 in. opposite turret; 7 $\frac{1}{2}$ in. and 9 in. on turrets; and 6 in. generally.	
10 in.		10 in. on sides; 12 in. on turrets and wall.		10 in.		10 in.		10 in.	
5 ft.		5 ft.		5 ft.		5 ft.		5 ft.	
9 "		3 "		4 "		4 "		8 ft. and 9 ft.	
1 $\frac{1}{2}$ in. in one thickness.		1 $\frac{1}{2}$ in.		1 $\frac{1}{2}$ in.		1 $\frac{1}{2}$ in.		1 $\frac{1}{2}$ in.	
$\frac{3}{8}$ in. on upper deck		$\frac{1}{2}$ in. on main deck		$\frac{1}{4}$ in. steel on upper deck; $\frac{3}{8}$ in. steel on main deck.		$\frac{1}{4}$ in. steel on upper deck; $\frac{3}{8}$ in. iron on main deck.		$\frac{3}{8}$ in. on upper deck outside inclosed part; $\frac{3}{8}$ in. inside inclosed part.	
As Stated. As Estimated.		As Stated. As Estimated.		As Stated. As Estimated.		As Stated. As Estimated.		As Stated. As Estimated.	
Tons. Tons.		Tons. Tons.		Tons. Tons.		Tons. Tons.		Tons. Tons.	
204 204		204 204		204 204		204 204		204 204	
85 158		108 158		1,170 158		158 158		158 158	
140 140		140 140		140 140		141 175		175 175	
760 370		464 246		360 339		339 264		264 397	
400 390		420 30		30 30		30 30		30 30	
30 30		30 30		30 30		30 30		30 30	
800 800		650 800		850 800		800 800		800 800	
— 25		— 25		25 25		25 25		25 25	
450 450		450 450		450 450		450 450		450 450	
2,469 2,577		2,436 2,473		2,470 2,167		2,147 2,503		2,503 2,355	
2,343 2,360		2,625 2,450		2,740 850		2,740 850		2,355 850	
1,040 1,070		788 788		3,442 148		850 140		850 140	
160 180		114 140		148 140		140 140		140 140	
already included 50		none none		none none		none none		100 100	
6,012 6,237		5,962 5,851		5,912 5,905		5,877 6,048		6,048 6,048	
— 225 deficiency		— 112 excess		53 excess 60 excess		22 excess —		—	

This ship's meta centre is only $\frac{5}{10}$ ths of a foot above her centre of gravity.

This ship's meta centre is only $\frac{5}{8}$ ths of a foot above her centre of gravity.

— V. —

COPIES of the REPLIES of the Secretary of the ADMIRALTY to each of the Firms.

The Secretary to the Admiralty to Messrs. *Napier*.

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you, that the design for a turret-ship of 3,774 tons, which you were pleased to submit on 27th July last, has been most carefully considered, and my Lords have decided that it would not be to the advantage of the public service to give preference to your design, as a whole, to the "Invincible" class of Her Majesty's ships.

I am commanded, at the same time, to convey to you their Lordships' thanks for having prepared and submitted a design of so much novelty and merit, and to express their sense of the great skill and ability which it embodies.

Messrs. Napier, Glasgow.

I am, &c.
(signed) *Henry G. Lennox*.

The Secretary to the Admiralty to Messrs. *Palmer & Co.*

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you, that the design for a twin screw iron-clad frigate, which you were pleased to submit on the 1st August last, has been most carefully considered, and my Lords have decided that it would not be to the advantage of the public service to give preference to your design, as a whole, to the "Invincible" class of Her Majesty's ships.

I am commanded, at the same time, to convey to you the thanks of their Lordships for having prepared and submitted a design of so much novelty and merit, and to express their sense of the great skill and ability which it embodies.

Messrs. Palmer & Co., Jarrow.

I am, &c.
(signed) *Henry G. Lennox*.

The Secretary to the Admiralty to Messrs. *Samuda*.

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you that the design for an iron-clad turret ship, of 3,590 tons, which you were pleased to submit on the 29th July last, has been most carefully considered.

It is somewhat beyond the draft of water laid down in their Lordships' letter of 15th May last, and is not altogether free from objections in some other respects.

These circumstances would not, however, have induced their Lordships to decline the design without further reference to you; but, after full consideration, my Lords have determined that it would not be to the advantage of the public service, either to build such a turret ship, with the light rig which you prefer, or to build a full-rigged turret ship of such dimensions, with a spar deck no more than 9½ feet above the water's surface, until the experimental sea-going turret ships, now in course of construction, have been tested at sea.

I am commanded to convey to you the thanks of their Lordships for the preparation of a design of so much merit, and to express to you their appreciation of the knowledge and skill which it embodies.

Messrs. Samuda, Poplar.

I am &c.
(signed) *Henry G. Lennox*.

The Secretary to the Admiralty to Messrs. *Laird Brothers*.

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you that the design for an iron-clad turret ship, of 3,764 tons, which you were pleased to submit on 27th July last, has been most carefully considered.

The Comptroller of the Navy, after a most thorough investigation, has reported very favourably upon it in many respects, and it undoubtedly possesses great merits.

It, nevertheless, embodies so many purely experimental features, resembling those which are about to be tested in the "Captain" and "Monarch," that after full consideration, my Lords have determined that it would not be to the advantage of the public service to adopt it, until those ships have been completed and tried.

I am commanded to convey to you the thanks of their Lordships for the preparation of a design of so much merit, and to express their high appreciation of the great knowledge and skill which it embodies.

I am further commanded by my Lords, in consideration of the superiority of your design to the designs of the other turret ships submitted, and to all the other designs, in so far as the amount of professional skill and ability expended on it are concerned, to request you to state, as soon as possible, for what price per ton you are willing to build a broadside ship, of the "Invincible" class, with the drawings and specifications of which you are already acquainted, and which you are at liberty to re-examine at the office of the Comptroller of the Navy, observing that my Lords will be happy if your tender should prove such as can be accepted, with due regard to the cost of similar ships, and to the interest of the public service, as they are desirous of ordering a new ship, if possible, from the designers of the best competitive ship.

Messrs. Laird Brothers,
Birkenhead.

I am, &c.
(signed) *Henry G. Lennox*.

The Secretary to the Admiralty to the Thames Iron Works Company.

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you that the design for an iron-clad ship, of 3,794 tons, which you were pleased to submit on the 29th July last, has been most carefully considered.

The Comptroller of the Navy, after a thorough investigation, has reported favourably upon it in many respects, and it undoubtedly possesses much merit; after full consideration, however, my Lords have determined that it would not be to the advantage of the public service to prefer it, as a whole, to the design of the "Invincible" class of Her Majesty's ships, but I am commanded in declining it, to convey to you the thanks of their Lordships for the preparation of a design of so much merit, and to express their appreciation of the knowledge and skill which it embodies.

I am further commanded by my Lords to state that, in consideration of these circumstances, and of the fact that your design is considered the best of the competitive broadside designs, my Lords are prepared to entertain a proposal for building a second ship of the "Volage" class, if you will submit to them, without delay, a tender which they can accept, with due regard to the fact that you have a similar ship in hand already, and to the interests of the public service.

The Thames Iron Works Company,
Orchard Yard, Blackwall.

I am, &c.
(signed) *Henry G. Lennox*.

The Secretary to the Admiralty to the Millwall Iron Company.

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you that the design for a turret ship of 3,749 tons, which you were pleased to submit on the 29th July last, has been most carefully considered, and my Lords have decided that it would not be to the advantage of the public service to give preference to your design, as a whole, to the "Invincible" class of Her Majesty's ships.

I am commanded, at the same time, to convey to you the thanks of their Lordships, for having prepared and submitted a design of so much novelty and merit, and to express their sense of the great skill and ability which it embodies.

The Millwall Iron Company,
Millwall, E.

I am, &c.
(signed) *Henry G. Lennox.*

The Secretary to the Admiralty to the London Engineering Company.

Gentlemen,

Admiralty, 8 October 1867.

I AM commanded by my Lords Commissioners of the Admiralty to inform you that the design for a broadside ship of 3,794 tons, which you were pleased to submit on the 29th July last, has been most carefully considered, and my Lords have decided that it would not be to the advantage of the public service to give preference to your design, as a whole, to the "Invincible" class of Her Majesty's ships.

I am commanded, at the same time, to convey to you the thanks of their Lordships, for having prepared and submitted a design of so much novelty and merit, and to express their sense of the great skill and ability which it embodies.

The London Engineering Company,
Poplar, E.

I am, &c.
(signed) *Henry G. Lennox.*

NAVY (DESIGNS FOR SHIPS).

COPY of the CIRCULAR LETTER of 16 May 1867, sent by the Admiralty to several Shipbuilding Firms, inviting Competitive Plans for Building either a TUGGER or a BROADSIDE SHIP, with the Reports of the Comptroller and Chief Constructor thereon; and, RETURN of the Number of Designs of each Class sent in, and the subsequent REPLY of the Admiralty to each Firm conveying their Decision thereon.

(*Mr. Sanuda.*)

*Ordered, by The House of Commons, to be Printed,
3 December 1867.*

NAVY (DISTRIBUTION OF FORCES).

RETURN to an Order of the Honourable The House of Commons,
dated 12 March 1868;—for,

RETURN “showing the Number of HER MAJESTY’S SHIPS and VESSELS
on the different STATIONS on the 1st day of March of each Year from
1847 to 1867, both inclusive, and their Total Complements of SEAMEN,
BOYS, and MARINES; and also the Number of MARINES ASHORE for
each Year during the same Period.”

Admiralty, }
24 March 1868.}

JOHN HENRY BRIGGS,
Chief Clerk.

(*Mr. Shaw Lefevre.*)

Ordered, by The House of Commons, to be Printed,
25 March 1868.

RETURN showing the Number of HER MAJESTY'S SHIPS and VESSELS on the different STATIONS on the 1st day of March

	1847.		1848.		March 1849.		October 1849.		1850.		1851.		1852.		1853.		1854.		1855.	
	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.
China and East Indies - - -	28	5,536	25	4,573	21	3,617	18	2,882	20	3,189	20	2,944	18	2,694	22	3,554	27	3,779	23	3,826
East Indies (separate command from 1865.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Australia* - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific - - - - -	16	3,864	12	3,495	12	2,709	14	3,139	13	2,558	13	2,767	12	2,058	10	1,893	9	1,764	10	2,602
South-east Coast of America - -	11	1,670	14	1,936	11	1,315	11	1,685	9	1,015	14	1,870	9	828	9	852	11	1,120	8	1,207
Cape of Good Hope - - -	11	2,098	10	1,862	9	1,452	8	1,033	9	917	8	757	11	1,241	8	770	8	759	7	482
West Coast of Africa - - -	32	3,523	27	2,785	28	2,814	25	2,332	25	2,543	28	3,089	24	2,420	19	1,801	18	1,761	12	1,145
North America and West Indies -	14	2,508	10	1,717	13	1,827	14	1,927	13	1,877	12	1,563	14	1,842	18	2,712	15	2,185	19	3,784
Mediterranean - - - -	18	2,865	31	8,337	27	8,244	27	8,226	28	8,264	19	6,125	23	8,249	20	6,777	35	13,499	54	18,817
Lakes of Canada - - - -	3	86	3	83	2	59	2	59	2	59	1	23	1	22	-	-	-	-	-	-
Baltic - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	12,899
Plymouth - - - - -	6	1,550	2	738	5	777	5	856	5	908	5	971	7	1,449	8	1,859	6	1,525	5	1,114
Portsmouth - - - - -	9	2,288	8	1,856	10	2,001	9	1,970	9	1,969	9	2,035	9	2,081	11	2,387	11	2,668	14	2,255
Sheerness - - - - -	6	816	5	778	6	811	7	813	7	856	6	944	7	1,107	7	1,225	7	1,264	9	1,090
Woolwich † - - - - -	-	-	1	26	2	248	3	250	-	-	-	-	-	-	-	-	4	200	4	2,000
Pembroke - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	84	2	62
Ireland and Scotland - - -	30	1,578	12	544	9	650	6	369	-	-	-	-	-	-	-	-	4	66	4	211
Squadron of Evolution - - -	13	5,540	7	3,057	-	-	-	-	10	4,236	8	3,196	10	4,137	1	821	11	5,246	-	-
Particular Service - - - -	9	1,404	9	1,304	11	827	13	1,133	16	1,078	20	2,008	19	1,474	23	2,963	23	1,736	15	2,284
Surveying Service - - - -	18	1,205	10	837	4	603	10	926	9	926	7	552	6	380	8	535	9	434	7	400
Packet Service - - - - -	27	657	29	711	20	575	17	567	19	567	8	112	6	26	6	27	6	27	-	-
Unappropriated and Fitting Out -	7	1,289	14	3,539	7	2,310	8	2,657	10	1,778	8	2,777	11	2,455	27	8,850	35	13,930	33	11,691
Under Orders to be Paid Off - -	1	70	3	740	4	1,865	1	240	-	-	3	925								
Stationary Ships, Yachts, &c. ‡	7	303	3	156	3	162	5	172	9	501	10	394	10	393	10	404	3†	120	3	120
Coast Guard Service § - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL - - -	266	38,850	235	39,124	204	32,866	203	31,236	213	33,241	199	33,052	197	32,856	207	37,430	244	52,167	267	65,989

* Previous to 1857, included in East Indies.

† One of Her Majesty's Yachts was stationed at Woolwich as a Receiving Ship until the end of 1847.

Admiralty, 16 March 1868.

STATEMENT showing the Number of MARINES serving *On Shore*

						Number on Shore.							Number on Shore.
1 March 1847	-	-	-	-	-	4,310	1 March 1852	-	-	-	-	-	4,652
„ 1848	-	-	-	-	-	5,745	„ 1853	-	-	-	-	-	4,775
„ 1849	-	-	-	-	-	6,354	„ 1854	-	-	-	-	-	4,223
„ 1850	-	-	-	-	-	5,745	„ 1855	-	-	-	-	-	4,481
„ 1851	-	-	-	-	-	4,527	„ 1856	-	-	-	-	-	6,277

Admiralty, 24 March 1868.

of each Year from 1847 to 1867, both inclusive, and their Total Complements of SEAMEN, BOYS, and MARINES.

1856.		1857.		1858.		1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.	Number of Ships.	Total Complement.
23	3,846	37	6,845	71	11,388	52	6,277	65	7,561	66	7,970	38	4,017	50	6,230	50	6,568	39	5,153	36	4,167	38	4,447
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	1,590	8	1,830	7	1,275
-	-	2	230	4	475	4	660	6	1,090	7	1,325	6	1,205	6	1,025	7	1,360	8	1,566	6	1,212	6	1,367
11	2,562	12	2,794	11	2,764	12	2,845	15	3,625	15	3,805	12	2,760	15	3,615	14	3,178	14	2,928	16	3,861	14	3,321
9	1,177	8	1,353	7	1,404	9	1,682	8	1,262	9	1,772	12	1,865	12	1,648	10	1,485	9	930	10	1,289	9	1,115
8	1,032	9	1,214	10	1,869	8	1,204	9	1,581	11	1,775	9	1,611	7	1,345	8	1,499	3	456	3	458	3	446
14	1,325	19	1,902	24	2,324	18	1,892	15	1,924	15	1,868	19	2,112	21	1,838	21	1,803	22	1,901	19	1,798	19	1,894
21	4,874	27	6,241	22	3,211	23	3,634	22	3,158	23	3,616	41	13,873	33	7,345	34	8,231	29	6,522	26	5,287	29	5,488
63	12,827	45	8,909	23	5,222	23	5,944	38	15,360	40	17,474	30	10,881	27	8,591	25	7,939	25	7,643	22	6,296	19	5,207
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	11,034	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	904	8	1,783	10	1,838	9	1,836	9	1,936	11	2,399	10	1,719	11	1,833	11	1,957	12	1,995	13	1,544	15	1,656
13	1,534	17	2,184	18	2,429	18	2,777	19	2,732	20	3,072	17	2,270	17	2,522	18	2,671	20	2,834	21	2,339	20	2,244
7	910	8	1,300	9	1,466	9	1,457	9	1,354	9	1,112	6	998	8	971	7	1,065	6	1,047	6	999	6	1,010
3	263	3	279	3	211	3	259	3	350	3	353	3	208	3	227	3	233	3	229	2	193	2	190
2	62	2	62	2	78	2	73	2	73	2	79	2	80	2	79	2	81	2	82	2	80	2	80
9	2,943	4	628	4	553	3	653	4	515	4	800	5	868	4	209	4	206	3	169	3	169	8	428
-	-	-	-	-	-	6	4,660	18	11,845	14	9,485	10	4,474	6	3,146	8	4,351	8	4,381	6	3,547	9	3,477
18	3,303	11	1,552	9	843	10	1,035	11	1,058	15	2,747	14	956	18	1,328	20	1,730	21	1,668	20	1,581	21	2,122
6	368	8	524	10	650	10	707	11	699	14	841	13	731	11	548	10	443	6	430	6	349	7	444
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	14,261	13	1,345	11	4,040	9	3,620	11	3,561	7	985	3	815	5	1,245	5	1,168	8	1,002	10	1,558	12	3,694
		2	850	-	-	-	-	1	750	-	-	2	519	1	175	1	60	-	-	-	-	1	130
3	188	3	138	3	138	3	138	3	221	3	147	3	147	3	147	3	145	4	238	4	238	4	241
-	-	7§	1,410	26§	3,576	26§	4,294	26§	4,304	26§	4,751	27§	4,699	26§	4,658	26§	4,697	26§	4,962	25§	4,027	25	3,969
346	63,413	245	41,543	277	44,479	257	45,647	305	64,959	314	66,376	282	56,808	286	48,725	287	50,870	276	47,726	264	42,822	276	44,245

† Royal Yachts only from 1854. § Exclusive of Coast Guard Tenders, late Cruisers.
N.B.—In the number of Ships on Foreign Stations are included those ordered to return to England.

on the 1st of March of each Year from 1847 to 1867 inclusive.

						Number on Shore.							Number on Shore.
1 March 1857	-	-	-	-	-	8,086	1 March 1862	-	-	-	-	-	8,339
„ 1858	-	-	-	-	-	6,127	„ 1863	-	-	-	-	-	10,032
„ 1859	-	-	-	-	-	6,055	„ 1864	-	-	-	-	-	8,807
„ 1860	-	-	-	-	-	5,785	„ 1865	-	-	-	-	-	9,198
„ 1861	-	-	-	-	-	7,217	„ 1866	-	-	-	-	-	8,889
							„ 1867	-	-	-	-	-	8,647

RETURN showing the Number of HER MAJESTY'S SHIPS and VESSELS on the different STATIONS on the 1st day of March of each Year from 1847 to 1867, both inclusive, and their Total Complements of SEAMEN, BOYS, and MARINES; and also the Number of MARINES ASHORE for each Year during the same Period.

(*Mr. Shaw Lefevre.*)

*Ordered, by The House of Commons, to be Printed,
25 March 1868.*

N A V Y.

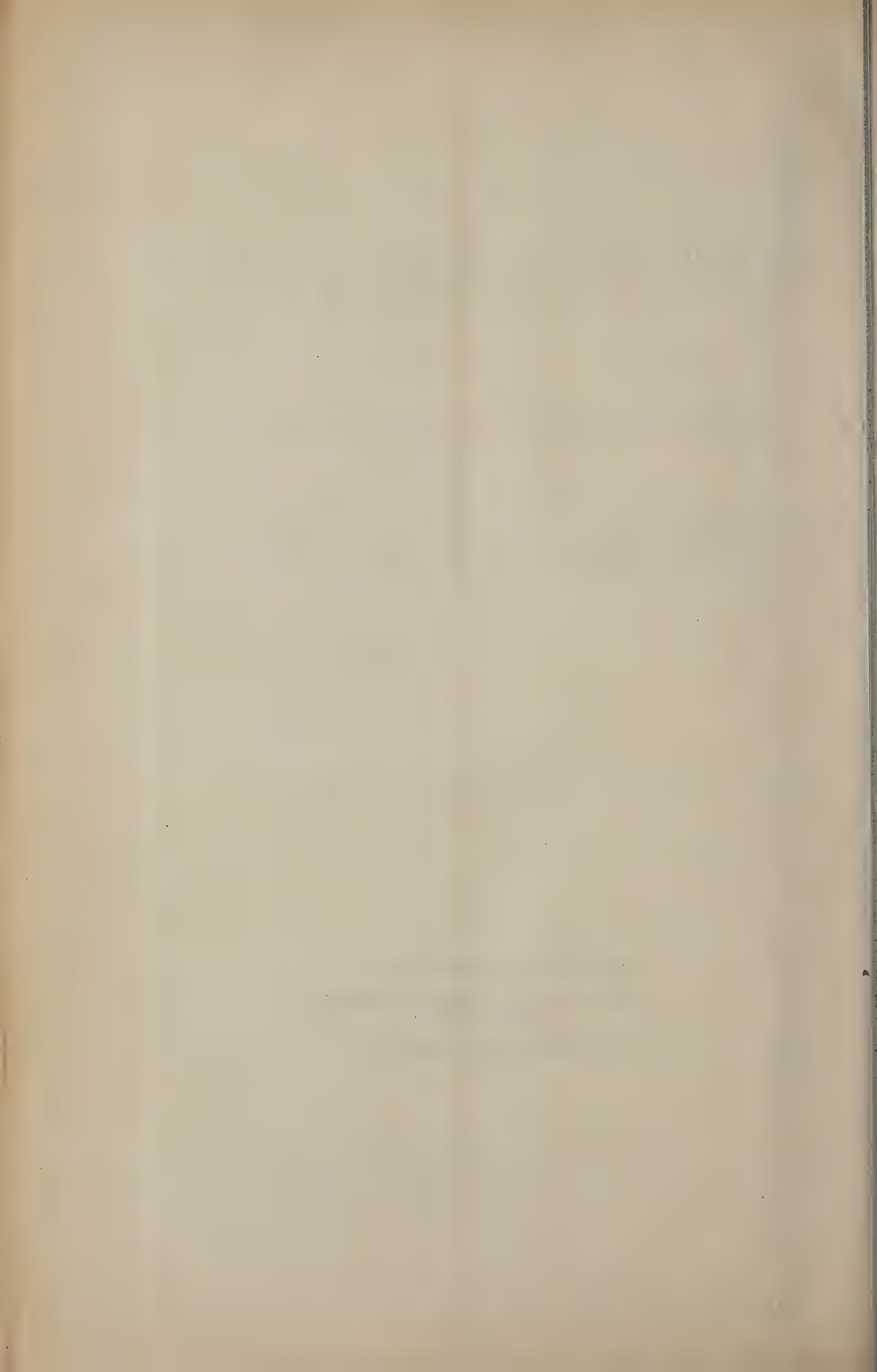
ADDITIONAL PAPERS with regard to the PROGRESS of SHIPBUILDING, &c.
in HER MAJESTY'S DOCKYARDS for the Years 1868-69, &c.

GENERAL SUMMARY showing the APPROPRIATION of VOTE 6.

PROGRAMME of DOCKYARD WORKS, showing the Estimated EXPENDITURE for
WAGES and MATERIALS upon the HULLS of SHIPS BUILDING.

(PRESENTED TO PARLIAMENT BY HER MAJESTY'S COMMAND.)

Ordered, by The House of Commons, to be Printed,
24 March 1868.



ESTIMATES, 1868-69.

GENERAL SUMMARY, showing the intended APPROPRIATION of the VOTE No. 6.

		WEAR AND TEAR AND MAINTENANCE OF THE FLEET AT HOME AND ABROAD.																		TOTALS. (Building and Fitting, Wear and Tear, and Maintenance.)												TO BE VOTED.			
		AT HOME.																																	
		WAGES.																																	
C.E.	TOTAL.		Repair, &c. of Ships, Harbour and Dockyard Services, Maintenance of Reserves and Manufactures.						New Boilers, Repair of Engines and Boilers, and Machinery of the Fleet, and Maintenance.		Repairs of Plant and New Machinery made in the Yard.		TOTAL.		SALARIES.		Rent, Rates, Taxes, Water, Gas, and Contingencies.	TEAMS.		POLICE.		TOTAL.		WAGES.		SALARIES.		Rents, Rates, Taxes, Water, Gas, and Contingencies.		TEAMS.		POLICE.			
	No. of Men, Officers, and Horses.	Amount.	Men.	Wages.	Men.	Wages.	Men.	Wages.	Men.	Wages.	No. of Officers, &c.	Amount.	Amount.	No. of Horses.	Amount.	No. of Men.	Amount.	No. of Men, Officers, and Horses.	Amount.	No. of Men.	Amount.	No. of Officers, &c.	Amount.	Per-centage on Wages.	Amount.	Per-centage on Wages.	No. of Horses.	Amount.	Per-centage on Wages.	No. of Men.	Amount.	Per-centage on Wages.	No. of Men, Officers, and Horses.	Amount.	
£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.		£.	
945	{Horses - 437}	31,959	221	13,192	No Factory at this Yard.		6	410	227	13,602	17	3,595	396	5	291	7	544	{Horses - 251}	18,368	622	37,270	46	9,686	26 nearly.	1,084	2 ³ / ₁₀	13	798	2 ¹ / ₂	20	1,489	4 nearly.	{Men, &c. - 688}	50,327	
940	{Horses - 570}	39,583	861	51,895	561	33,672	36	2,494	1,458	88,061	61	14,150	2,488	12	604	33	2,562	{Horses - 1,552}	107,865	1,994	120,377	83	19,342	16 ¹ / ₁₅	3,401	2 ⁴ / ₅	16	826	2 ² / ₅	45	3,502	2 ⁹ / ₁₀	{Men, &c. - 2,122}	147,448	
3,947	{Horses - 2,685}	169,377	498	28,008	No Factory at this Yard.		75	5,274	573	33,282	17	4,052	476	7	280	12	909	{Horses - 602}	38,999	3,131	177,802	92	21,648	12 ³ / ₁₀	2,545	1 ³ / ₅	36	1,525	4 ⁷ / ₁₀	64	4,856	2 ⁷ / ₁₀	{Men, &c. - 3,287}	208,376	
220	{Horses - 109}	8,028	1,117	70,988	415	25,127	38	2,714	1,570	98,829	81	16,692	1,869	19	896	44	3,338	{Horses - 1,695}	121,624	1,671	105,353	86	17,794	16 ³ / ₁₀	1,992	1 ⁷ / ₁₀	20	955	2 ¹ / ₁₀	47	3,558	3 ⁴ / ₁₀	{Men, &c. - 1,804}	129,652	
1,348	{Horses - 527}	35,719	2,222	131,323	647	42,677	102	7,114	2,971	181,114	120	26,005	4,702	34	1,781	112	8,378	{Horses - 3,203}	221,980	3,461	210,258	139	30,189	14 ⁷ / ₁₀	5,459	2 ³ / ₅	40	2,067	1 nearly.	130	9,726	4 ³ / ₅	{Men, &c. - 3,730}	257,699	
618	{Horses - 234}	16,801	2,095	127,477	646	36,169	81	5,673	2,822	169,319	133	29,497	4,583	32	1,889	104	7,850	{Horses - 3,059}	213,138	3,038	182,667	143	31,822	17 ³ / ₅	4,944	2 ⁷ / ₁₀	34	2,038	1 ¹ / ₅	112	8,408	4 ³ / ₅	{Men, &c. - 3,293}	229,939	
2,134	{Horses - 1,211}	75,797	146	7,840	No Factory at this Yard.		48	3,372	194	11,212	7	1,772	211	6	278	5	390	{Horses - 206}	13,863	1,337	72,513	48	11,462	15 ¹ / ₅	1,365	1 ⁴ / ₅	39	1,796	2 ¹ / ₅	32	2,524	3 ¹ / ₅	{Men, &c. - 1,417}	89,660	
-	-	-	18	670	-	-	-	-	18	670	-	-	-	-	-	-	-	-	18	670	-	-	-	-	-	-	-	-	-	-	-	-	Men - 18	670	
10,152	-	-	7,178	431,393	2,269	137,645	386	27,051	9,833	596,089	436	95,703	14,725	115	6,019	317	23,971	-	-	15,272	906,910	637	141,943	15 ³ / ₅	20,790	2 ¹ / ₁₀	198	10,005	1 ⁷ / ₁₀	450	34,123	3 ³ / ₅	-	-	
	{Horses - 5,773}	377,264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	{Horses - 10,586}	736,507	-	-	-	-	-	-	-	-	-	-	-	-	-	{Men, &c. - 16,359}	1,118,771	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	475	15,637	-	-	-	-	-	-	-	-	-	-	-	-	475	15,637	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	4,000	-	-	-	-	-	-	-	-	-	-	-	-	55	4,000	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,000	-	-	-	-	-	-	-	-	-	-	-	-	-	4,000	4,000	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	2,000	-	-	-	-	-	-	-	-	-	-	-	-	48	2,000	
	{Men - 5,773}	377,264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	{Men, &c. - 11,164}	762,144	-	-	-	-	-	-	-	-	-	-	-	-	-	{Men, &c. - 16,937}	1,139,408	
	{Horses - 83}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	{Horses - 115}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	{Horses - 498}	-	
ABROAD.																																			
WAGES.																																			
Repairs, &c., of Ships, Engines, and Boilers, Harbour and Dockyard Services, &c.						Repairs of Plant and New Machinery made in the Yard.		TOTAL.		SALARIES.		Rents, Rates, Taxes, Water, Gas, and Contingencies.		POLICE.		TOTAL.																			
No. of Men.	Amount.	No. of Men.	Amount.	No. of Men.	Amount.	No. of Officers, &c.	Amount.	Per-centage on Wages.	Amount.	Per-centage on Wages.	No. of Men.	Amount.	Per-centage on Wages.	No. of Men, &c.	Amount.																			Men.	Amount.
867	£. 45,846	15	£. 1,012	882	£. 46,858	104	£. 27,329	58 ¹ / ₅	£. 4,021	8 ³ / ₅	78	£. 5,888	12 ³ / ₅	1,064	£. 84,096																			1,064	£. 84,096
Yard Service Afloat															71	4,121																	71	4,121	
Extra Pay to Artificers of the Fleet															-	9,000																	-	9,000	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-	-	
															-	-																	-		

PROGRAMME of SHIPBUILDING WORKS to be undertaken in HER MAJESTY'S
DOCKYARDS during the Year 1868-69.

GENERAL SUMMARY, showing the Appropriation of Men proposed for the
Year 1868-69.

For Ships Building, and for completing new Ships Afloat, for Sea	}	5,439
Service - - - - -		
For Repairs and Refits to Sea-going and all other Ships, Casualties,	}	9,815
Yard Craft, Harbour and Dockyard Services, &c. &c., and for		
Maintenance of Ships in Reserve - - - - -		
TOTAL Strength - - - - -		15,254

Note.—The Scheme of Works must be considered as indicating only the probable employment of the Artificers of the Dockyards. The casual work is extremely uncertain, but provision has been made for meeting it as far as can be foreseen. It is not possible to say exactly what repairs and refits will be undertaken during the financial year, so much depends upon the state in which the vessels are found to be when examined in dock; and therefore the list of ships to be refitted must be taken as one which it will not be practicable to follow without considerable variation.

Controller's Office, }
24 March 1868. }

Robert Spencer Robinson.

ABSTRACT of the PROGRAMME of Works in the DOCKYARDS for 1868-69.

	DEPTFORD.			WOOLWICH.			CHATHAM.			SHEERNESS.			PORTSMOUTH.			DEVONPORT.			PEMBROKE.			TOTAL.		
	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.	Number of Men.	Tons ordered.	Expense on the Hull for Wages and Materials.
Iron-clad Frigates -	-	-	£. -	-	-	£. -	1,518	3,120	190,928	-	-	£. -	-	-	£. -	-	-	£. -	648	1,356	70,422	2,168	4,476	261,350
Iron-clad Turret Ship	-	-	-	-	-	-	1,014	2,072	130,000	-	-	-	-	-	-	-	-	-	-	-	-	1,014	2,072	130,000
Iron Frigate -	-	-	-	-	-	-	-	-	-	-	-	-	110	373	20,000	-	-	-	416	1,307	75,000	536	1,080	95,000
Converted Iron-clad Frigate -	-	-	-	271	980	83,559	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	271	930	83,553
Wood Corvettes -	183	744	24,010	101	615	19,684	-	-	-	68	248	8,300	-	-	-	-	-	-	-	-	-	412	1,607	59,900
Iron Corvettes -	-	-	-	-	-	-	-	-	-	-	-	-	36	120	4,500	-	-	-	-	-	-	36	120	4,800
Sloops -	142	-	23,988	64	288	9,600	-	-	-	-	-	-	107	551	21,545	72	237	7,659	-	-	-	445	1,623	63,090
Twin Screw Gun Vessels -	70	290	12,000	32	124	5,200	20	83	2,501	33	124	4,389	75	243	14,400	83	124	8,500	79	243	8,078	354	1,241	55,721
Twin Screw Gun Vessels of Second Class ("Dread" Class) -	-	-	-	8	30	1,050	-	-	-	-	-	-	18	60	2,100	45	159	5,250	-	-	-	71	240	8,400
Tug Steamer -	-	-	-	-	-	-	-	-	-	-	-	-	6	20	700	-	-	-	-	-	-	6	20	700
Mooting Lighters -	-	-	-	-	-	-	-	-	-	-	-	-	60	200	8,200	60	200	8,200	-	-	-	120	400	16,400
Twin Screw Monitor Turret Ship for Melbourne -	-	-	-	-	-	-	-	-	-	-	-	-	18	60	3,600	-	-	-	-	-	-	18	60	3,600
TOTAL -	395	1,628	60,905	636	1,987	119,063	2,553	5,275	323,832	101	373	12,645	490	1,635	75,345	216	711	29,009	1,143	2,911	154,100	5,439	14,460	775,520
Repairs and Refits to Sea-going and all other Ships, Casualties, Yard Craft, Harbour and Dockyard Services, &c., &c., and for Maintenance of Ships in Reserve	227	-	-	1,453	-	-	273	-	-	-	-	-	2,971	-	-	2,822	-	-	-	104	-	9,815	-	-
GRAND TOTAL -	622	-	-	1,964	-	-	3,131	-	-	-	-	-	3,461	-	-	3,098	-	-	-	1,337	-	15,554	-	-

LIST of SHIPS BUILDING and COMPLETING for SEA, provided for in the PROGRAMME of DOCKYARD WORKS for 1868-69.

NOT YET LAUNCHED.

IRON-CLAD FRIGATES:

"Repulse," to launch and complete for sea	-	Woolwich.
"Sultan," to be advanced to $\frac{2\frac{1}{4}}{8}$ ths	-	Chatham.
"Triumph," to be advanced to $\frac{1}{8}$ th	-	Chatham.
"Iron Duke," to be advanced to $\frac{2\frac{7}{8}}{8}$ ths	-	Pembroke.

IRON-CLAD TURRET SHIP:

"Monarch," to launch and complete for sea	-	Chatham.
---	---	----------

IRON FRIGATE:

"Inconstant," to launch at Pembroke, and complete for sea	-	Portsmouth.
--	---	-------------

WOODEN VESSELS:

"Juno" Class:		
"Thalia," to be advanced to $\frac{5\frac{5}{8}}{8}$ ths	-	Woolwich.
"Druid" Class:		
"Druid," to be advanced to $\frac{4\frac{1}{8}}{8}$ ths	-	Deptford.
"Briton," to be advanced to $\frac{1\frac{1}{8}}{8}$ ths	-	Sheerness.

WOODEN VESSELS—continued.

"Blanche" Class:

"Spartan," to launch at Deptford, and complete for sea	-	Woolwich.
"Sirius," to launch and complete for sea	-	Portsmouth.
"Dido," to be advanced to $\frac{3}{8}$ ths	-	Portsmouth.
"Tenedos," to be advanced to $\frac{3}{8}$ ths	-	Devonport.

"Plover" Class:

"Curlew," to launch at Deptford, and complete for sea at	-	Woolwich.
"Woodlark," to be advanced to $\frac{1}{8}$ th	-	Chatham.
"Vulture," to be advanced to $\frac{2}{8}$ ths	-	Sheerness.
"Swallow," to launch and complete for sea	-	Portsmouth.
"Bittern," to be advanced to $\frac{3}{8}$ ths	-	Pembroke.

Mooring Lighters:

One to build complete	-	Portsmouth.
One to build complete	-	Devonport.

ALREADY LAUNCHED.

IRON-CLAD FRIGATE:

"Hercules," to complete for sea	-	Chatham.
---------------------------------	---	----------

WOODEN VESSELS:

"Plover" Class:

"Maggie," to complete for sea	-	Portsmouth.
"Seagull," to complete for sea	-	Devonport.

BUILDING by CONTRACT, to be completed for Sea at the Dockyards, after being received from the Contractors.

TURRET SHIP FOR MELBOURNE:

"Cerberus"	-	Portsmouth.
------------	---	-------------

IRON CORVETTES:

"Volage"	-	Portsmouth.
"Active"	-	Portsmouth.

COMPOSITE GUN VESSELS:

"Rocket"	-	Woolwich.
"Teazer"	-	Portsmouth.

COMPOSITE GUN VESSELS—continued.

"Hornet"	-	Portsmouth.
"Midge"	-	Devonport.
"Hart"	-	Devonport.
"Pert"	-	Devonport.
"Growler"	-	Devonport.
"Lynx"	-	Devonport.

TUG:

"Grinder,"	-	Portsmouth.
------------	---	-------------

DEPTFORD YARD.

No. of Slip.	Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868 - 69.				REMARKS.
							In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be Employed on Ship.	Ship to be Advanced.			
											In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expendi- ture for Labour and Materials on the Hull.	
BUILDING AND COMPLETING FOR SEA:						£.			£.				£.	
2	Gun Vessel	3	160	663	23,200	"Curlew" -	3	249	6,000	70	3½	290	12,000	To launch. To complete for sea at Woolwich.
1	Sloop -	6	350	1,268	42,586	"Spartan" -	2¼	436	9,000	142	3¾	594	23,986	To launch. To complete for sea at Woolwich.
4	Corvette -	12	350	1,322	44,279	"Druid" -	-	-	-	183	4½	744	24,919	
TOTAL BUILDING - - -										395	11¼	1,628	60,905	
WEAR and TEAR and MAINTENANCE of the FLEET:														
* Repairs - - - - -										227				
Manufactories - - - - -														
Harbour and Yard Services, &c. - - - - -														
GRAND TOTAL - - -										622				

* The wear and tear, maintenance, and repairs of the following Ships is allowed for, but whether they are taken in land or not must depend on their condition when examined in dock or afloat:—
"Shearwater," "Torch," "Racer;" all Yard Craft, Store Ships, &c.

Note.—The actual effective strength of the working men of the Yard may always be considered 5 per cent. below the total strength, from absences, sickness, &c. &c.

WOOLWICH YARD.

No. of Ship.	Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868-69.				REMARKS.		
							In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be Employed on Ship.	Ship to be Advanced.					
											In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expendi- ture for Labour and Materials on the Hull.			
BUILDING AND COMPLETING FOR SEA:																
					£.				£.				£.			
5	Converted Iron Clad Frigate.	12	800	3,716	228,559	"Repulse" -	6	2,786	145,000	271	2	930	83,559	To launch and com- plete for sea.		
4	Corvette -	6	400	1,459	46,696	"Thalia" -	2½	409	17,000	161	3½	615	19,684			
							Probable State of Advancement of the Ship on Arrival at Woolwich.									
ADDITIONAL SHIPS TO BE COMPLETED AFTER BUILDING ELSEWHERE:																
-	Gun Vessel	3	160	663	23,200	"Curlew" -	6½	539	18,000	32	1½	124	5,200	To complete for sea after building at Deptford.		
-	Sloop -	6	350	1,268	42,586	"Spartan" -	6½	1,030	32,986	64	1½	238	9,600	To complete for sea after building at Deptford.		
-	Gun Vessel	4	120	464	14,000	"Rocket" -	7½	434	12,950	8	½	30	1,050	To complete for sea after building by contractors.		
TOTAL BUILDING - - -										536	8½	1,937	119,093			
WEAR AND TEAR and MAINTENANCE of the FLEET:																
* Repairs - - - - -																
Manufactories - - - - -																
Harbour and Yard Service, &c. - - - - -																
GRAND TOTAL - - -										1,994						

* The wear and tear, maintenance, and repairs of the following Ships is allowed for, but whether they are taken in hand or not must depend on their condition when examined in dock or afloat:—
"Barrosa," "Ranger," "Wolverene," "Niger," "Mutine," "Enterprise," "Buffalo," "Megara," "Fox," "Hesper," "Dee," "Industry," supply all Yachts, Tenders, Yard Craft, and Hulks.

Note.—The actual effective strength of the working men of the yard may always be considered 5 per cent. below the total strength, from absences, sickness, &c. &c.

CHATHAM YARD.

No. of Ship.	Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868-69.				REMARKS.	
							In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be Employed on Ship.	Ship to be Advanced.				
											In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expendi- ture for Labour and Materials on the Hull.		
BUILDING AND COMPLETING FOR SEA:						£.				£.				£.	
	Iron Clad Frigate.	12	1,200	5,226	320,000	"Hercules" -	6	3,919	239,000	639	2	1,307	81,000		To complete for sea after launching.
Dock, No. 3.	Iron Clad Turret Ship.	6	1,000	5,100	300,000	"Monarch" -	4½	3,028	170,000	1,014	3½	2,072	130,000		To launch and complete for sea.
3	Gun Vessel	3	160	663	23,200	"Woodlark" -	-	-	-	26	1	83	2,904		
Dock, No. 2.	Iron Clad Frigate.	12	1,200	5,226	320,000	"Sultan" -	-	-	-	719	2½	1,488	91,113		
Dock, No. 3.	Iron Clad Frigate.	-	-	3,800*	220,000*	"Triumph" -	-	-	-	160	½	325	18,815		
TOTAL BUILDING - - -										2,558	9	5,275	323,832		
WEAR and TEAR and MAINTENANCE of the FLEET:															
† Repairs - - - - -															
Manufactories - - - - -															
Harbour and Yard Service, &c. - - - - -															
GRAND TOTAL - - -										3,131					

* Not yet finally decided.

† The wear and tear, maintenance, and repairs of the following Ships is allowed for, but whether they are taken in hand or not must depend on their condition when examined in dock or afloat:—
Ships for Harbour Service, Yard Craft, Tugs, &c.

Note.—The actual effective strength of the working men of the yard may always be considered 5 per cent. below the total strength, from absences, sickness, &c. &c.

SHEERNESS YARD.

Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868-69.				REMARKS.	
						In Eighthths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be Employed on Ship.	Ship to be Advanced.				
										In Eighthths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expenditure for Labour and Materials on the Hull.		
BUILDING AND COMPLETING FOR SEA:														
				£.				£.					£.	
Corvette -	12	350	1,322	44,279	" Briton" -	-	-	-	68	1½	248	8,306		
Gun Vessel	3	160	663	23,200	" Vulture" -	½	41	2,000	33	1½	124	4,339		
TOTAL BUILDING - - -									101	3	372	12,645		
WEAR AND TEAR and MAINTENANCE of the FLEET:														
Repairs*	-	-	-	-	-	-	-	-	1,570					
Manufactories	-	-	-	-	-	-	-	-						
Harbour and Yard Service, &c.	-	-	-	-	-	-	-	-						
GRAND TOTAL - - -									1,671					

* The wear and tear, maintenance, and repairs of the following Ships is allowed for, but whether they are taken in hand or not must depend on their condition when examined in dock or afloat:—

"Cossack," "Forte," "Columbine," "Scylla," "Salamander," "Snipe," "Espoir," "Miranda," "Ajax," "Fawn," "Terrible," "Basilisk," "Cadmus," "Landrail," "Medusa," "Scout," all Yachts, Tenders, Yard Craft, and Hulks; maintain all Harbour Ships and Ships in reserve; Coast Guard Ships ("Duncan," "Pembroke," and "Dauntless").

te.—The actual effective strength of the working men of the yard may always be considered 5 per cent. below the total strength, from absences, cess, &c. &c.

PORTSMOUTH YARD.

No. of Ship.	Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868-69.				REMARKS.			
							In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be employed on Ship.	Ship to be Advanced.						
											In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expendi- ture for Labour and Materials on the Hull.				
BUILDING AND COMPLETING FOR SEA :						£.			£.				£.				
1	Sloop	-	6	350	1,268	42,586	"Sirius"	-	6	951	29,000	95	2	317	13,586	To launch and complete for sea.	
2	Sloop	-	6	350	1,268	42,586	"Dido"	-	1½	237	10,000	72	1½	237	7,959		
3	Gun Vessel	3	160	663	23,200	23,200	"Magpie"	-	7	581	17,000	24	1	82	6,200	To complete for sea after launching.	
4	Gun Vessel	3	160	663	23,200	23,200	"Swallow"	-	6	497	15,000	51	2	166	8,200	To launch and complete for sea.	
				About 200	8,200	Mooring Lighter	-	-	-	-	-	60	8	200	8,200		
						Probable State of Advancement of the Ship on Arrival at Portsmouth.											
ADDITIONAL SHIPS TO BE COMPLETED AFTER BUILDING ELSEWHERE :																	
	Gun Vessel	4	120	464	18,800	18,800	"Teazer"	-	7½	434	12,750	9	½	30	1,050	To complete for sea after building by contractors.	
	Gun Vessel	4	120	464	12,700	12,700	"Hornet"	-	7½	434	11,650	9	½	30	1,050	To complete for sea after building by contractors.	
	Tug - -	-	150	332	10,060	10,060	"Grinder"	-	7½	312	9,360	6	½	20	700	To complete for sea after building by contractors.	
	Iron Corvette cased with wood.	8	600	2,322	77,900	77,900	"Volage"	-	7½	2,262	75,500	18	¾	60	2,400	To complete for sea after building by contractors.	
	Iron Corvette cased with wood.	8	600	2,322	77,900	77,900	"Atcive"	-	7½	2,262	75,500	18	¾	60	2,400	To complete for sea after building by contractors.	
	Iron Armour-plated Turret Ship.	4	250	2,107	102,600	102,600	"Cerberus"	-	7½	2,047	99,000	18	½	60	3,600	To complete for sea after building by contractors.	
	Iron Frigate	16	1,000	3,978	160,000	160,000	"Inconstant"	-	7½	3,605	140,000	110	¾	373	20,000	To complete for sea after building at Pembroke.	
TOTAL BUILDING - - -												490	17½	1,635	75,345		
WEAR and TEAR and MAINTENANCE of the FLEET :																	
* Repairs - - - - -																2,971	
Manufactories - - - - -																	
Harbour and Yard Service, &c. - - - - -																	
GRAND TOTAL - - -												3,461					

• The wear and tear, maintenance, and repairs of the following Ships is allowed for, but whether they are taken in hand or not must depend on their condition when examined in dock or afloat :—
"Resistance," "Valiant," "Esk," "Sharpshooter," "Highflyer," "Cygnet," "Sparrowhawk," "Glasgow," "Octavia," "Blazer," "Swan," "Wave," "Peacock," "Cherokee," "Brave," "Serapis," "Crocodile," "Orontes," "Simoom," "Wallace," "Erebus"; all Yacht Tenders, Yard Craft, and Hulks; all Gunnery and Training Ships, and such portions of the Channel Fleet as may be sent there. Coast Guard Ships ("Frederick William" and "Irresistible"), maintain all Harbour Ships, and Ships in Reserve.

Note.—The actual effective strength of the working men of the yard may always be considered 5 per cent. below the total strength from absences, sickness, &c. &c.

DEVONPORT DOCKYARD.

Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868-69.				REMARKS.	
						In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be Employed on Ship.	Ship to be Advanced.				
										In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expenditure for Labour and Materials on the Hull.		
BUILDING AND COMPLETING FOR SEA:														
				£.				£.				£.		
Gun Vessel	3	160	663	23,200	"Seagull" -	6½	539	15,000	39	1½	124	8,200	To complete for sea after launching.	
Sloop	6	350	1,268	42,586	"Tenedos" -	1½	237	8,000	72	1½	237	7,959		
-	-	-	About 200	8,200	Mooring Lighter	-	-	-	60	8	200	8,200		
						Probable State of Advancement of the Ship on Arrival at Devonport.								
ADDITIONAL SHIPS TO BE COMPLETED AFTER BUILDING ELSEWHERE:														
Gun Vessel	4	120	464	12,300	"Midge" -	7½	434	11,250	9	½	30	1,050	To complete for sea after building by contractors.	
Gun Vessel	4	120	464	12,300	"Hart" -	7½	434	11,250	9	½	30	1,050	To complete for sea after building by contractors.	
Gun Vessel	4	120	464	13,300	"Pert" -	7½	434	12,250	9	½	30	1,050	To complete for sea after building by contractors.	
Gun Vessel	4	120	464	9,800	"Growler" -	7½	434	8,750	9	½	30	1,050	To complete for sea after building by contractors.	
Gun Vessel	4	120	464	10,500	"Lynx" -	7½	434	9,450	9	½	30	1,050	To complete for sea after building by contractors.	
TOTAL BUILDING - - -									216	13½	711	29,609		
WEAR and TEAR and MAINTENANCE of the FLEET:														
*Repairs - - - - -									2,822					
Manufactories - - - - -														
Harbour and Yard Service, &c. - - - - -														
GRAND TOTAL - - -									3,038					

* The wear and tear, maintenance, and repairs of the following Ships is allowed for, but whether they are taken in hand or not must depend on their condition when examined in dock or afloat:—

"Northumberland," "Black Prince," "Achilles," "Valorous," "Agincourt," "Triton," "Steady," "Gannet," "Nimble," "Penguin," "Constance," "Sphinx," "Cordelia," "Assurance," "Brisk," "Gladiator," "Research," "Himalaya," "Urgent," "Tamar," "Prince of Wales," "Windsor Castle," "Albion," "Canopus," "Centurion," "Forth," "Sea Horse," "Creole," "Atalanta." Coal depôt to replace "Fly;" all Yachts, Tenders, Yard Craft and Hulks, all Gunnery and Training Ships, and such portions of the Channel Fleet as may be sent there; Coast Guard Ships ("St. George," "Royal George," "Lion," and "Donegal"), maintain all Harbour Ships and Ships in reserve.

Note.—The actual effective strength of the working men of the yard may always be considered 5 per cent. below the total strength, from absences, sickness, &c. &c.

PEMBROKE YARD.

No. of Ship.	Rate.	Guns.	Horse Power.	Tonnage.	Estimated Cost, Wages, and Materials for the Hull complete.	NAME OF SHIP.	Probable State of Advancement of the Ship on 31st March 1868.			1868-69.				REMARKS.
							In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Amount that will probably have been Expended for Labour and Materials on the Hull.	Number of Men to be Employed on Ship.	Ship to be Advanced.			
											In Eighths and Fractional Parts of an Eighth.	Equivalent Tonnage.	Equivalent Expendi- ture for Labour and Materials on the Hull.	
					£.				£.				£.	
BUILDING AND COMPLETING FOR SEA:														
4	Iron Frigate	16	1,000	3,978	160,000	"Inconstant"	4 $\frac{5}{8}$	2,298	65,000	416	2 $\frac{1}{4}$	1,307	75,000	To launch. To complete for sea at Portsmouth.
7	Gun Vessel	3	160	663	23,200	"Bittern" -	-	-	-	79	3	248	8,678	
-	Iron Clad Frigate.	14	800	3,774	196,000	"Iron Duke" -	-	-	-	648	2 $\frac{7}{8}$	1,356	70,422	
TOTAL BUILDING - - -										1,143	8 $\frac{1}{2}$	2,911	154,100	
WEAR and TEAR and MAINTENANCE of the FLEET:														
* Repairs - - - - -										194				
Manufactories - - - - -														
Harbour and Yard Service, &c. - - - - -														
GRAND TOTAL - - -										1,337				

* The wear and tear, maintenance and repairs of the following Ships is allowed for, but whether they are taken in hand, or not, must depend on their condition when examined in dock or afloat:—
Coast Guard Ship ("Revenge"), "Lightning," Yard Craft, &c., maintain "Nankin," and "Hope."

Note.—The actual effective strength of the working men of the yard may always be considered 5 per cent. below the total strength, from absences, sickness, &c. &c.

N A V Y.

ADDITIONAL PAPERS with regard to the
PROGRESS of SHIPBUILDING, &c. in HER
MAJESTY'S DOCKYARDS for the Years 1868-69,
&c.

GENERAL SUMMARY
Showing the APPROPRIATION of VOTE 6.

PROGRAMME of DOCKYARD WORKS, showing the
Estimated EXPENDITURE for WAGES and MATERIALS
upon the HULLS of SHIPS BUILDING.

(Presented to Parliament by Her Majesty's Command.)

Ordered, by The House of Commons, to be Printed,
24 March 1868.

166.
Under 2 oz.

NAVY ESTIMATES.

1868-9.

COPY of MEMORANDA by Lieutenant Colonel *Clarke*, R.E., Director of Works.

EXPLANATORY OF VOTE 11.

THE Votes asked for the Royal Dockyards of Deptford, Woolwich, and Sheerness are, looking to the proposed eventual suppression of those establishments, limited to such sums as are requisite for the maintenance of the existing structures, and for the effective and economic completion of the current work on the building, repair, and fitting of ships, until the new works at Chatham are sufficiently advanced to admit of those services being undertaken at that yard.

CHATHAM EXTENSION.

My estimate of January 1865 for the execution of the works approved by Parliament in connection with the extension of Chatham Dockyard amounted to 1,750,000 *l.*, to be reduced in proportion as convicts are more or less employed. The further experience we have had in dealing (as we have been doing) with a treacherous and uncertain soil, leads me to hope that it is correct.

Up to this date 540,000 *l.* has been expended, of which 265,000 *l.* has been paid for the supply of plant and material for the employment during the last year of from 700 to 1,100 convicts, whose labours are supplemented and led by from 250 to 350 free artificers and labourers. The latter are principally kept at tidal or other work on which it is not safe nor judicious to use forced toil.

The balance, 275,000 *l.*, has been paid to the contractors for the main work commenced in March 1867, under the provisions of the Act of August 1866, and for the new landing, public wharves, and draw dock at Gillingham, for the purchase of property, &c.

Exclusive of the convicts employed in quarrying and preparing stone at Portland, and the labourers employed in obtaining materials and otherwise by the contractor, there are now 1,180 free men and 1,160 convicts engaged daily on these works.

A large proportion, nearly two-thirds, of the convicts are employed in making bricks, the total number so made by them amounting to 48,500,000, at an average cost of about 1 *l.* per 1,000. The bricks are supplied to the contractors at their schedule rates of 37 *s.* per 1,000.

In addition to this, and approaching completion, are 5,300 feet of the river wall, and 4,500 feet of the stone-faced embankment enclosing St. Mary's Island, and connecting it with the dockyard on the west, and Gillingham on the east. These works have been constructed in great part by prison labour.

Besides 61 artificer prisoners employed in the shops, 40 convicts are engaged in the manufacture of cement, and others as platelayers, mud bootmakers, horse drivers, &c.

The convicts have also constructed the whole of the works, and a large portion of the plant, connected with the brickfield, including 22 brickkilns, and $8\frac{3}{4}$ miles of hacks with fixed and sliding covers.

About 120 are now employed in the formation of the new road from Brompton to the extension works, including the retaining wall under Brompton Hill, and a new boundary wall to the dockyard.

A party is also engaged in building new police quarters near the prison.

About 600 feet run of the repairing basin wall has also been built by the convicts.

They have also, in addition to forming the roads and railroads, executed many other minor works, such as landing jetties, traveller ways, workshops, sheds, &c., as well as what has been already mentioned as done by them in connection with the brickfield.

This labour is supplemented by 28 steam-engines, working saw-mills, pumps, brick-making machines, pile-engines, cranes, &c.; there are also two locomotives on the works. The total quantity of timber used has amounted to about 20,000 loads.

For the contract works commenced in March 1867, 124,300 *l.* had at the end of last financial year been paid, and up to this date a further sum of 315,000 *l.*, whilst the average monthly expenditure for the remainder of this financial year will be 12,000 *l.*

These works afford employment to from 1,100 to 1,200 men, independently of those engaged in preparing plant and material elsewhere.

The materials required for those portions now under contract amount to 154,000 cubic yards of concrete, 60,000,000 bricks, 500,000 cubic feet of granite, 35,000 tons of Portland stone, 217,000 cwt. of cement, 25,000 yards of blue lias lime, and 600,000 cubic feet of fir timber. It will also be necessary to remove and deposit 2,500,000 yards of soil.

The excavation, bearing piles, sheeting piles, fir sleepers, with cement and brick sub-invert of one dock are complete, and the setting of the granite floor is fast progressing; the excavation of the second dock is far forward, and the piling foundations are very nearly completed.

In the repairing basin the north wall is complete to within 10ft. 4in. of the coping level, or where the ashlar commences, and good progress has been made with the remaining walls. I have, consequently, every reason to hope that this repairing basin, with two of its docks, available for the largest class of ships, may be completed and ready for use by October of next year.

The new wharf at Gillingham, for the general use of the public, in substitution for those of which they were deprived at Prince's Hard and Gillingham, will be opened for traffic by the 1st of April 1869.

This work has been executed by contract, and will have cost about 40,000 *l.*

Lieut.-Colonel Pasley, R.E., has the general superintendence of these works, assisted by Mr. Bernays, C.E., and Mr. Neville, C.E.

Messrs. Gabrielli, Foord Brothers, and Ball, hold the several contracts; the first-named being the contractor for the two docks and basin.

PORTSMOUTH EXTENSION.

The Admiralty did not obtain final possession of the site for this work till 1866, and the first contract was let from 1st April 1867, the necessary preliminary work of making a new boundary wall having been done in the interim.

Arrangements for the yield of not less than 20,000,000 bricks a year by convict labour have also been made, and that number will this year be produced.

Their cost is less than that of the bricks made at Chatham, where sand and a certain portion of clay have to be purchased and brought from a distance to be mixed with the local soil, whilst at Portsmouth first class brick material is obtained from the excavation of the basin. Here also I have adopted Hoffman's German kilns, by which less coal is used than is required for the Scotch kilns at Chatham.

Mills and kilns have been erected for the manufacture of cement, and are now in full work.

Five hundred and seventy convicts are employed, of whom 530 are engaged in brickmaking, the remainder being artificers, are occupied in preparing plant, and in making and repairing tools, &c.

Their labour has been supplemented by 20 steam engines applied to brick machines, pile engines, mills, lifts, &c.

As the number of convicts available for this extension has been limited to 600, whereas in my project of 1865 I provided for 2,000 being placed on them,
a larger

a larger proportion of the works will now have to be done by contract, and, accordingly, on the 1st April 1867 arrangements were made for the immediate construction by contract of the tidal basin, locks, one deep dock, two first-class docks, the repairing basin, and the wharf walls of rigging and fitting out basins.

For these works 84,200 *l.* was paid last year, and for this year a further sum of 200,000*l.* is required.

Though the actual amount of permanent work done is at the present time limited to the progress made in the construction of the two docks, the preliminary and temporary arrangements made by the contractors are very thorough and extensive, involving an outlay which I estimate cannot fall far short of 150,000 *l.*

The site of the permanent works is surrounded by coffer dams nearly 7,000 feet in extent, the greater portion of which is driven, shored, and puddled.

To facilitate the receipt and landing of materials, a strong wharf of timber 200 feet long by 40 wide has been constructed in deep water; it is fitted with steam cranes and railways, and connected with the mainland by a viaduct 700 feet in length sufficiently stable for heavy steam traffic.

Two railway viaducts, one 3,500 feet and another 1,850 feet long, to convey the excavated material to the place of deposit, have been completed, and are being used.

Over the whole area some 10 miles of rails have been laid.

Powerful pumping engines for keeping the whole area of nearly 95 acres and the excavation free from water, have been placed in position.

The factories and workshops for the preparation and repair of plant, including locomotive engines, are very extensive and complete.

Large quantities of timber, both fir and beech, granite dressed and ready to set, Portland stone both dressed and in block, pile shoes, shingle and gravel for concrete, with many millions of bricks, are on the ground. For the works in progress, the following quantities of these materials will be required, and a large proportion of them is already on the ground:—

Cubic Feet.

126,816 Portland stone supplied by the contractors.

85,984 Ditto from Government quarries.

190,957 Granite supplied by contractors.

91,500 Timber beech ditto.

Cube Yards.

6,000 Shingle for concrete supplied by contractors.

Thirty-seven horses and 27 steam engines are engaged on these works, and in addition they afford daily employment to between 2,000 and 3,000 men.

This large first outlay by the contractors will doubtless enable them eventually to execute the work rapidly and economically.

These works are under the general superintendence of Mr. Henry Wood, C.E., Superintending Civil Engineer, assisted by Mr. Macdonald, C.E., Messrs. Leather and Smith being the contractors.

DEVONPORT AND KEYHAM.

At Devonport and at Keyham the proposed expenditure this year is confined to what is required for additional machinery, and the current charges for the efficient working and maintenance of the establishments.

Since the Report of the Select Committee of 1864 advising the addition of two docks, and an increase of the basin area at Keyham, the North Basin has been opened, the work having been completed in January last; and until further experience of the working of this increased accommodation has been gained, it would be hardly advisable to extend it; but I would advise that the water alongside the outer or Hamoaze Wharf wall should be deepened to 26 feet low water spring tides.

The two docks recommended might be obtained by the conversion of the present abandoned old dock No. 3 in Devonport Yard into a first class dock, and by utilising the north entrance of the North Basin, and constructing a dock out of it as shown by the dotted lines in the accompanying plan.

PLYMOUTH BREAKWATER.

The amended section of the sea face of Plymouth Breakwater adopted by me when repairing the damages caused by the gales of previous years has been sufficiently tested to justify its being extended to the rest of the western arm so injured.

PEMBROKE.

At Pembroke no new work is proposed, the amount inserted in the Estimates is limited to what is necessary for the purchase of some additional machinery, and the ordinary necessities of the yard.

HAULBOWLINE.

The Irish Government, since November 1867, having increased the number of convicts from 270 to 460 men, with 100 free artificers and labourers, these works are now making better progress. Tenders have been invited, and are under consideration, for the construction by contract of the eastern wall and embankment.

The expenditure, so far incurred, amounts to 26,000 *l.* (including 500 *l.* for the purchase of Rat Island, which was private property), of which 7,000 *l.* has been for plant, as steam travellers, steam pile engines, pumps, &c., and 13,000 *l.* for timber and material, 5,000 *l.* for the wages of the free mechanics, and 1,000 *l.* for superintendence.

Workshops, stone-cutting sheds, and overhead travellers have been erected, and the requisite rails laid down.

By a timber viaduct, 2,500 feet in length, I have connected Haulbowline with Spike Island, to avoid the difficulties and danger of bringing the prisoners to the works in boats.

A portion of this staging carries a double line of rails, and is equal to engine traffic.

I propose to encircle the whole work by an embankment (except at the entrance, which will be temporarily closed by a coffer dam), of which 1,600 feet, containing 120,000 tons of the debris and excavation from the quarry, have been completed.

Fifty-seven thousand cubic feet of stone have been quarried and dressed, estimated to be of the value of 5,700 *l.*

A coffer dam of 240 feet has been completed, and the excavation commenced within it for a portion of the western wall of the basin.

PORTLAND.

For Portland Harbour, which may now be regarded as the head-quarters of the Channel Fleet, and which will probably become, in time of war, the point of departure and rendezvous for our fleet when taking the sea against an enemy, rapid and most efficient coaling arrangements are wanting, and a sum in the current year amounting to 2,000 *l.* has been taken for commencing them.

VICTUALLING AND MEDICAL ESTABLISHMENTS.

The victualling and medical establishments at home and abroad are in very good order, and the usual provision for their current services is only required.

MARINE BARRACKS.

The extension of and sanitary improvements to the several marine barracks, which have of late years required large votes, are now approaching completion, and the sum asked for this year is limited to 15,400 *l.*, the principal item being 3,000 *l.* towards the erection of quarters for married marine soldiers, and 5,000 *l.* towards the additional accommodation for officers and men at Plymouth.

The repairs of these barracks are now altogether executed by marine labour, and I am extending its application to the construction of some of the new buildings. I hope also to be able to report favourably next year of the working of this system at Chatham, where, by my Lords' order of 22nd May last, a party of marines is to be employed in the repairs of buildings within the dockyard.

GIBRALTAR.

At Gibraltar convicts only are employed, and the sum taken is limited to the amount sufficient to provide plant, and a small number of free artificers for the further progress of the mole on the east side of the Naval Harbour.

A mole has also been proposed on the north side, but the details have not yet been prepared.

MALTA.

At Malta, in the progress of setting the floor of the dock in French Creek, greater difficulties than I had anticipated when I prepared, in 1865, my design and estimate, have had during the last year to be encountered in consequence of a deep-seated fissure connected with the water of the creek. This has largely increased the cost for pumping, and has delayed the work, but I have still every hope that my estimate will not be exceeded.

The caisson for the entrance, under contract in this country, will be taken out to Malta in pieces, and is to be put together in its place by October of this year.

The engine house is nearly completed, and the permanent engines and pumps are being fixed.

The total expenditure so far has been about 85,000 *l.*, including the first cost of engines, pumps, and plant.

Mr. Andrews, C. E., is the local officer superintending the works, which I have executed by hired labour, day and measured work, without the intervention of a contractor.

BERMUDA.

The floating dock for Bermuda, as first designed for vessels of the "Belierophon" class, would under the original agreement with the builder have been completed by the 1st March of this year, but in a very early stage of the progress of the work I thought it desirable to increase its stability and add to its strength; this will enable me to lift vessels of the "Minotaur" class sufficiently clear of the water for most purposes, but without the caissons in place.

These advantages involved an extension of time for construction, and the dock will not be launched till the 2nd September of this year, when I propose to take it round at once to Portland, and during the ensuing winter thoroughly to test its capabilities previous to dispatching it from this country in the early summer of next year.

£.212,000 has been paid on account of this contract; the dock is seven-eighths and its final cost will not exceed my estimate of 1866.

JAPAN.

Of the remaining items for naval establishments abroad, the only new one is that for a permanent hospital at Yokohama.

By this establishment for about 30 officers and 120 men in the healthier climate of Japan, the costly and unsatisfactory hospital ships at Hong Kong

and Shanghai will be superseded, whilst it is further hoped that the present necessity for invaliding home officers and men from the China squadron, a proceeding which both impairs its efficiency and entails a heavy annual expenditure, will be removed.

Of the total estimated cost of this hospital (25,000 *l.*), I have only asked in this year for 1,000 *l.*, as certain detailed local information requisite for the final preparation of my designs previous to instructions being issued for their being carried out will not have reached me in time to enable a larger outlay being incurred within this financial year.

(signed) *Andrew Clarke.*

June 1868.

NAVY ESTIMATES.

1868-9.

COPY of MEMORANDA by Lieutenant Colonel
Clarke, R.E., Director of Works, EXPLANATORY
of VOTE 11.

(Presented to Parliament by Her Majesty's Command.)

Ordered, by the House of Commons to be Printed,
6 July 1868.

394.

Under 1 oz.

DOCKYARDS AND FACTORIES.

RETURN to an Order of the Honourable The House of Commons,
dated 21 May 1868 ;—for,

RETURN “showing the SUM Voted for WAGES in HER MAJESTY’S DOCKYARDS and FACTORIES at HOME, for the Year 1867–8 ; the actual EXPENDITURE within the Year, and the Source from which the Excess of Expenditure over Estimate was drawn ; also, the Number of SHIPWRIGHTS and LABOURERS for whom Provision was made in the Estimates of 1867–8, the actual Number at each of the DOCKYARDS and FACTORIES at HOME at the commencement of each Month in the same Year and the present Financial Year, and the Number to which it is proposed to Reduce them.”

Admiralty, }
29 May 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

	£.	s.	d.
Sum Voted for Wages (including Teams) in Her Majesty’s Dock- yards at Home, for the Year 1867–8 - - - - -	1,046,625	-	-
Actual Expenditure within the Year, including Teams - -	* 1,092,525	17	-
Source from which the Excess of Expenditure over Estimates was drawn - - - - - - - - - -	Vote 10, Section 2, Ships Building by Contract, &c.		

* The whole of the Dockyard Cashiers’ Accounts received from the Yards for the Year 1867–8 being not yet audited, the actual Expenditure may ultimately differ from this amount.

the Estimates for 1867-8, the actual Number at each of the DOCKYARDS and FACTORIES at HOME at the and the Number to which it is proposed to Reduce them.

October.	November.	December.	January.	February.	March.	April.	May.	Number to be Reduced to, per Estimates 1868-9.
311	308	305	306	305	311	309	270	259
334	333	313	309	304	294	249	185	186
737	866	930	955	1,021	1,018	905	538	525
546	599	597	600	650	645	616	411	397
122	122	119	132	137	166	166	123	142
907	907	904	900	895	899	894	894	945
975	974	963	884	877	861	850	857	790
590	658	655	649	645	537	518	527	511
396	394	404	401	402	397	382	354	209
86	94	93	97	98	96	94	88	87
1,424	1,563	1,563	1,563	1,562	1,575	1,416	1,131	938
1,332	1,316	1,315	1,310	1,307	1,297	1,180	866	660
189	218	218	221	221	220	178	172	112
895	962	892	1,007	1,045	1,082	1,017	977	837
772	844	854	852	887	862	804	741	534
226	252	288	287	296	293	268	235	178
458	457	456	454	464	461	461	455	406
422	445	441	440	436	436	446	452	373
may be assumed that the small numbers allowed are employed - - - - -								3
								13

DOCKYARDS AND FACTORIES.

RETURN showing the Sum Voted for Wages in Her Majesty's Dockyards and Factories at Home, for the Year 1867-8, the actual Expenditure within the Year, and the Source from which the Excess of the Expenditure over Estimate was drawn; also, the Number of Shipwrights and Labourers for whom Provision was made in the Estimates of 1867-8, the actual Number at each of the Dockyards and Factories at Home at the commencement of each Month in the same Year and the present Financial Year, and the Number to which it is proposed to Reduce them.

(*Mr. Shaw Lefevre.*)

Ordered, by The House of Commons, to be Printed,
4 June 1868.

NAVY (FIRST CLASS BOYS, &c.)

RETURN to an Order of the Honourable The House of Commons,
dated 16 August 1867;—for,

RETURN “ showing the Number of First Class BOYS, Second Class BOYS, *bonâ fide* SEAMEN, COAST GUARD FLEET MEN, &c., who were Borne, Rated, Entered, or who Left the Service, during the Years 1865–66 and 1866–67 (in continuation of Parliamentary Paper, No. 134, of Session 1866)”.

Admiralty,
29 November 1867. }

JOHN HENRY BRIGGS,
Chief Clerk.

RETURN respecting the Entry, &c. of SEAMEN and BOYS in the ROYAL NAVY, as specified below.

		1865–66.	1866–67.	1st April 1866.	1st April 1867.
1. Number of First Class Boys entered <i>for the first time</i> on board Her Majesty's Ships during the years 1865–66 and 1866–67, distinguishing those entered in District Coast Guard Ships - - - - - }	In Sea-going and Harbour Ships - -	15	7	—	—
	In District Coast Guard Ships - -	48	47	—	—
	TOTAL - - -	63	54	—	—
2. Number of Second Class Boys entered <i>for the first time</i> on board Her Majesty's Ships during the years 1865–66 and 1866–67, distinguishing those entered in Training Ships and District Coast Guard Ships - - - - - }	In Harbour Ships (None in Seagoing Ships):				
	For Service in such Ships - -	23	44	—	—
	For transfer to Training Ships - -	367	615	—	—
	In Training Ships - - - - -	1,437	1,347	—	—
	In District Coast Guard Ships:				
	For Service in Cruisers, &c. - -	38	24	—	—
	For transfer to Training Ships - -	297	1,039	—	—
	TOTAL - - -	2,162	3,069	—	—
3. Number of First Class Boys, in Her Majesty's Service on 1st April of the years 1866 and 1867 - - - - - }	- - - - -	-	-	4,335	3,984
4. Number of Second Class Boys in Her Majesty's Service on 1st April of the years 1866 and 1867, distinguishing those that were in Training Ships from those that were in other Ships - - - - - }	In all Ships except Training Ships - -	-	-	286	129
	In Training Ships - - - - -	-	-	2,404	3,045
	TOTAL - - -	-	-	2,690	3,174
5. Number of <i>bonâ fide</i> Seamen who were rated from Boys during the years 1865–66 and 1866–67 - - - - - }	- - - - -	1,470	2,399	—	—
6. Number of <i>bonâ fide</i> Seamen (exclusive of Pensioners on the books of Her Majesty's Ships, and Coast Guard Men on Shore) on the 1st day of April of the years 1866 and 1867 - - - - - }	- - - - -	-	-	19,883	19,624
7. Number of Coast Guard Fleet Men on Shore on the 1st day of April of the years 1866 and 1867 - - - - - }	- - - - -	-	-	3,745	3,892
8. Number of <i>bonâ fide</i> Seamen who entered the Royal Navy from the Shore, Merchant, or other Service <i>for the first time</i> , during the years 1865–66 and 1866–67 - -	- - - - -	485	409	—	—
9. Number of <i>bonâ fide</i> Seamen who have left the Service from all causes during the years 1865–66 and 1866–67, distinguishing those who were paid off to the Shore from those who were discharged from other causes - - }	* Paid off to the Shore - -	2,362	2,141	—	—
	† From other causes - -	2,007	1,936	—	—
	TOTAL - - -	4,369	4,077	—	—
10. Number of Boys who have left the Service from all causes during the years 1865–66 and 1866–67 - - - }	- - - - -	430	634	—	—

* The Head “ Paid off to the Shore,” includes all men discharged to the Shore on their Ships being paid off, or at any other time, “by request,” as “ objectionable,” or for “ incompetency,” &c.

† The Head “ From other causes” includes “ Deaths,” “ Invalidings,” “ Desertions,” “ Discharges with disgrace,” and “ Discharges by purchase,” and on “ Pension.”

Admiralty,
31 October 1867. }

J. Whiffin,
Deputy Accountant General of the Navy.

NAVY (FIRST CLASS BOYS, &c.)

RETURN showing the Number of First Class Boys, Second Class Boys, *bond fide* SEAMEN, COAST GUARD FLEET MEN, &c., who were Borne, Rated, Entered, or who Left the Service, during the Years 1865-66 and 1866-67 (in continuation of Parliamentary Paper, No. 134, of Session 1866).

(*Mr. Graves.*)

*Ordered, by The House of Commons, to be Printed,
2 December 1867.*

NAVY (FIRST CLASS BOYS, &c.)

RETURN to an Order of the Honourable The House of Commons,
dated 18 July 1868;—for,

RETURN “ showing the Number of First Class BOYS, Second Class BOYS, *bonâ fide* SEAMEN, COAST GUARD FLEET MEN, &c., who were Borne, Rated, Entered, or who Left the Service, during the Year 1867-8 (in continuation of Parliamentary Paper, No. 23, of the present Session)”.

Admiralty, }
24 July 1868. }

N. HOUGHTON,
pro Chief Clerk.

RETURN respecting the Entry, &c. of SEAMEN and BOYS in the ROYAL NAVY, as specified below.

		1867-68.	1st April 1868.
1. Number of First Class Boys entered for the first time on board Her Majesty's Ships during the year 1867-68, distinguishing those entered in District Coast Guard Ships - - - -	In Sea-going and Harbour Ships :		
	For Service in such Ships - - - -	14	—
	For Training - - - -	179	—
	In District Coast Guard Ships :		
	For Service in such Ships - - - -	49	—
	For Training - - - -	130	—
	TOTAL - - - -	372	—
2. Number of Second Class Boys entered for the first time on board Her Majesty's Ships during the year 1867-68, distinguishing those entered in Training Ships and District Coast Guard Ships - - - -	In Harbour Ships (None in Seagoing Ships) :		
	For Service in such Ships - - - -	22	—
	For transfer to Training Ships - - - -	896	—
	In Training Ships - - - -	1,229	—
	In District Coast Guard Ships :		
	For Service in Cruisers, &c. - - - -	28	—
	For transfer to Training Ships - - - -	530	—
	TOTAL - - - -	2,705	—
3. Number of First Class Boys in Her Majesty's Service on 1st April of the year 1868 - - - -	- - - -	- -	4,621
4. Number of Second Class Boys in Her Majesty's Service on 1st April of the year 1868, distinguishing those that were in Training Ships from those that were in other Ships - - - -	In all Ships except Training Ships - - - -	- -	103
	In Training Ships - - - -	- -	2,922
	TOTAL - - - -	- -	3,025
5. Number of <i>bonâ fide</i> Seamen who were rated from Boys during the year 1867-68 - - - -	- - - -	2,078	—
6. Number of <i>bonâ fide</i> Seamen (exclusive of Pensioners on the books of Her Majesty's Ships, and Coast Guard Men on Shore) on the 1st day of April of the year 1868 - - - -	- - - -	- -	19,456
7. Number of Coast Guard Fleet Men on Shore on the 1st day of April of the year 1868 - - - -	- - - -	- -	3,980
8. Number of <i>bonâ fide</i> Seamen who entered the Royal Navy from the Shore, Merchant, or other Service for the first time, during the year 1867-68* - - - -	- - - -	445	—
9. Number of <i>bonâ fide</i> Seamen who have left the Service from all causes during the year 1867-68, distinguishing those who were paid off to the Shore from those who were discharged from other causes - - - -	† Paid off to the Shore - - - -	1,886	—
	† From other causes - - - -	1,672	—
	TOTAL - - - -	3,558	—
10. Number of Boys who have left the Service from all causes during the year 1867-68 - - - -	- - - -	559	—

* To render the information regarding the Entry of Seamen more complete, the following, although not called for, is added for each of the Years embraced in the present and previous Returns, viz. :

Number of *bonâ fide* Seamen who re-entered the Royal Navy from the Shore, Merchant, or other Service during the years specified :

1860-61 - - - -	1,752	1864-65 - - - -	1,041
1861-62 - - - -	1,933	1865-66 - - - -	1,136
1862-63 - - - -	1,907	1866-67 - - - -	920
1863-64 - - - -	1,812	1867-68 - - - -	844

† The Head “ Paid off to the Shore,” includes all men discharged to the Shore on their Ships being paid off, or at any other time, “by request,” as “ objectionable,” or for “ incompetency,” &c.

† The Head “ From other Causes,” includes “ Deaths,” “ Invalidings,” “ Desertions,” “ Discharges with Disgrace,” and “ Discharges by Purchase,” and on “ Pension.”

Admiralty, }
11 November 1868. }

J. Beeby,
Accountant General of the Navy.

NAVY (FIRST CLASS BOYS, &c.)

RETURN showing the Number of First Class Boys, Second Class Boys, *bond fide* SEAMEN, COAST GUARD FLEET MEN, &c., who were Borne, Rated, Entered, or who Left the Service, during the Year 1867-8 (in continuation of Parliamentary Paper, No. 23, of Session 1867-8).

(*Mr. Graves.*)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

GREENWICH HOSPITAL.

1865-66.

ACCOUNTS of the RECEIPT and EXPENDITURE of the CAPITAL and of the
INCOME derived from the LANDS and PROPERTY held for the Benefit of
GREENWICH HOSPITAL.

(Presented in pursuance of Act 28 & 29 Vict. c. 89, ss. 47 and 49.)

Ordered, by The House of Commons, to be Printed,
31 March 1868.

AN ACCOUNT of the RECEIPT and EXPENDITURE of the CAPITAL held for the

CAPITAL ACCOUNT. - - - - -

R E C E I P T S.		C A S H.	Money on Loan.	S T O C K.	
				Reduced 3 per Cent. Annuities.	Consolidated 3 per Cent. Annuities.
				New 3 per Cent. Annuities.	New 2½ per Cent. Annuities.
To BALANCES on 1st October 1865, for Stock in the following Funds, viz.:	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
3 per Cent. Consolidated Annuities - - -	- - -	- - -	- - -	- - -	1,173,702 17 2
3 per Cent. Reduced - - - - -	1,520,761 - 8	- - -	- - -	- - -	- - -
New 3 per Cent. - - - - -	105,682 10 4	- - -	- - -	- - -	- - -
New 2½ per Cent. - - - - -	8,800 - -	- - -	- - -	1,635,243 11 -	- - -
For LOANS granted by the late Commissioners of Greenwich Hospital, outstanding, viz.:					
Trustees of Greenwich and Woolwich Lower Roads (balance) - - - - -	1,039 14 2	- - -	- - -	- - -	- - -
Trustees of Alston Roads (balance) - - -	25,793 4 1	- - -	- - -	- - -	- - -
Commissioners for the Exhibition of 1851 (balance)	100,000 - -	- - -	- - -	- - -	- - -
Loan on Mortgage of Hartburngrange Estate -	18,000 - -	- - -	144,832 18 3	- - -	- - -
To PRODUCE of the SALE of Stock in 3 per Cent. CONSOLIDATED ANNUITIES, viz.:					
On 7th October 1865 of £. 164,535. 5. 10. Stock, at 89½ - - - - -	146,642 1 7	- - -	- - -	- - -	- - -
On 19th December 1865 of £. 1,324. 10. 6. Stock at 87¼ - - - - -	1,068 7 11	- - -	- - -	- - -	- - -
On 13th March 1867 of £. 1,283. 2. 2. Stock at 91¼ - - - - -	1,168 3 3	148,878 12 9	- - -	- - -	- - -
To INSTALMENTS of LOANS repaid, viz.:					
On 28th December 1865 by Commissioners for the Exhibition of 1851 - - - - -	1,980 - -	- - -	- - -	- - -	- - -
On 12th and 14th March 1866 by Commissioners for the Exhibition of 1851 - - - - -	2,310 - -	- - -	- - -	- - -	- - -
On 22nd February 1866 by Trustees of Greenwich and Woolwich Lower Roads - - - - -	141 5 -	- - -	- - -	- - -	- - -
On 26th March 1866 by Trustees of Alston Roads	200 - -	4,631 5 -	- - -	- - -	- - -
To TRANSFER from Income Account on 1st March 1867, for Investment in 3 per Cent. Consolidated Annuities, as per contra - - - - -	- - -	5,000 - -	- - -	- - -	- - -
To STOCK Purchased:					
On 15th January 1866, as per contra - - -	2,269 6 10	- - -	- - -	- - -	- - -
On 2nd March 1867, as per contra - - -	5,479 9 -	- - -	- - -	- - -	7,748 15 10
	£.	158,509 17 9	144,832 18 3	1,635,243 11 -	1,181,451 13 -

Exchequer and Audit Department,
(Examined) F. A. Hawker, Inspector.

Benefit of GREENWICH HOSPITAL, for the Half-year ended 31st March 1866.

CAPITAL ACCOUNT.

P A Y M E N T S.	C A S H.	Money on Loan.	S T O C K.	
			Reduced 3 per Cent. Annuities. — New 3 per Cent. Annuities. — New 2½ per Cent. Annuities.	Consolidated 3 per Cent. Annuities.
By PURCHASE of ANNUITIES to Officers and others of the Hospital, viz. :	£. s. d.	£. s. d.	£. s. d.	£. s. d.
For Transfer on 7th October 1865 to the Com- missioners for the Reduction of the National Debt - - - - -	146,642 1 7			
For ditto on 19th December 1865 - - -	1,068 7 11	147,710 9 6		
By OUTLAY on NORTHERN ESTATES :				
New Farm Buildings, &c. stipulated for on re- newal of Leases - - - - -	797 17 8			
Additional Farm Buildings and Drainage of Land (Tenants paying 5 per Cent. on the Outlay) -	370 5 7	1,168 3 3		
By STOCK purchased in the 3 per Cent. Consolidated Annuities, viz. :				
On 15th January 1866 of £.2,269. 6. 10. Stock, at 87½ - - - - -	1,980 - -			
On 2nd March 1867 of £.5,479. 9. Stock, at 91½	5,000 - -	6,980 - -		
By LOANS repaid to the Hospital for Cash received in redemption thereof, as per contra, viz. :				
Commissioners for the Exhibition of 1851 - -	4,290 - -			
Trustees of Greenwich and Woolwich Lower Roads	141 5 -			
Trustees of Alston Roads - - - - -	200 - -	4,631 5 -		
By LOANS Written off in part :				
For Difference between the Sum received and the Amount of the Loan thereby paid off, viz. : 55 per Cent. on the Loan to the Trustees of Alston Roads, as per contra - - - - -	- - -	244 8 10		
By CASH, for Stock sold, as per contra :				
On 7th October 1865 - - - - -	164,535 5 10			
On 19th December 1865 - - - - -	1,224 10 6			
On 13th March 1867 - - - - -	1,283 2 2			
				167,042 18 6
		155,858 12 9	4,875 13 10	167,042 18 6
BALANCE on CAPITAL ACCOUNT - - -	2,651 5 -	139,957 4 5	1,635,243 11 -	1,014,408 14 6
	£. 158,509 17 9	144,892 18 3	1,635,243 11 -	1,181,451 13 -

Admiralty, 19 August 1867.

(signed) J. Beeby,
Accountant General of the Navy.

AN ACCOUNT of the RECEIPT and EXPENDITURE of the INCOME derived from the LANDS and

INCOME ACCOUNT. - - - - -

HEADS OF RECEIPT.		RECEIPTS for Half-year to 31 March 1866.
	£. s. d.	£. s. d.
To BALANCES on the 1st October 1865:		
For Amount remaining at the credit of the Commissioners of Greenwich Hospital at the Bank of England, transferred to the Cash Account of Her Majesty's Paymaster General - - - - -	8,382 6 -	
For - - - - ditto - - - - ditto - - - - in the hands of the late Cashier of the Hospital - - - - -	619 10 11	
For - - - - ditto - - - - ditto - - - - remaining in the hands of the Receiver of the Northern Estates of Greenwich Hospital -	1,194 4 11	
		10,196 1 10
To DIVIDENDS ON FUNDED PROPERTY:		
For Dividends received for Half-year on Stock held in the 3 per Cent. Consolidated Annuities - - - - -	15,137 10 3	
Reduced 3 per Cent. Annuities - - - - -	22,811 8 3	
New 3 per Cent. Annuities - - - - -	1,585 4 9	
New 2½ per Cent. Annuities - - - - -	110 - -	
		39,644 3 3
To INTEREST ON LOANS:		
For Amount received for Half-year on Loans granted to the Commissioners for the Exhibition of 1851 - - - - -	1,963 9 5	
To Trustees of Greenwich and Woolwich Lower Roads - - - - -	12 15 8	
On Mortgage of Hartburngrange Estate - - - - -	354 - -	
		2,330 5 1
To TRANSFER from Consolidated Fund in lieu of Merchant Seamen's Sixpences (4 & 5 Will. 4, c. 34) - - - - -	- - -	10,000 - -
To RENTS of Hospital Property at Greenwich and Isle of Dogs - - - - -	- - -	2,919 19 9
To PROPORTION of Freightage on conveyance of Treasure in Her Majesty's Ships - - - - -	- - -	860 14 11
To PROCEEDS of the Sale of old and unserviceable Hospital and School Stores -	- - -	148 17 7
To CONSCIENCE-MONEY received as due to the Hospital - - - - -	- - -	286 18 4
To MOIETY of Fines and Miscellaneous Receipts of Greenwich Hospital Property - - - - -	- - -	132 12 4
Carried forward - - - £.		66,519 13 1

PROPERTY held for the Benefit of GREENWICH HOSPITAL, for the Half-year ended 31st March 1866.

- - - - - INCOME ACCOUNT.

HEADS OF EXPENDITURE.		EXPENDITURE for Half-year to 31 March 1866.
	£. s. d.	£. s. d.
By PAYMENTS on account of Property at GREENWICH and ISLE of DOGS, viz.:		
Ground-rent of Land in Isle of Dogs, and Fee Farm Rents - - - -	186 8 2	
Rates and Taxes on House Property in Greenwich, Commission on collection of Petty Rents, &c. - - - - -	45 16 1	
Small Repairs to House Property at Greenwich - - - - -	29 7 5	
Fire Insurance on Property, Expenses of Powers of Attorney on Sale of Stock, Advertisements, &c. - - - - -	60 15 9	
		322 7 5
NORTHERN ESTATES OF GREENWICH HOSPITAL.		
LANDS, COLLIERIES, QUARRIES, &c.		
By EXPENSES of MANAGEMENT, viz.:		
Salaries and Contingencies of Receiver of the Northern Estates and Establishment - - - - -	- - -	1,036 14 11
By OUTLAY for the Benefit of the Estates, viz.:		
New Fences, Stone Walls, Embankments, &c. - - - - -	257 8 2	
Repairs and Alterations of Farm Buildings, &c. - - - - -	266 7 4	
		523 15 6
By DISBURSEMENTS under the following Heads, viz.:		
Tithe Rent-charges - - - - -	672 2 5	
Land Tax, Fee Farm, and other Rent-charges - - - - -	145 3 4	
Subscriptions to Schools and Charities, including Stipends - - -	269 8 7	
Law Charges - - - - -	22 4 2	
Retiring Allowances - - - - -	360 - -	
Value of Crop on Newland's West Farm, taken by Lessors on Valuation, as per Agreement - - - - -	298 11 3	
Allowances to Tenants of several Farms for Lime, as per Agreement -	110 - -	
Ditto in consequence of the average price of Wheat in the County having been below 44s. per Quarter - - - - -	92 19 -	
Expenses attending Rent Audits, Fire Insurance Premiums, &c. - - -	82 3 10	
		2,052 12 7
WOODS.		
By WAGES of Woodkeepers, Extra Men, Planting, Felling Trees, &c., Fencing, Draining Plantations, and Repairs, Nursery Goods, Taxes, Rates, and other charges - - - - -	- - -	572 9 9
Carried forward - - - £.		4,508 - 2

AN ACCOUNT of the Receipt and Expenditure of the Income derived from the Lands and Property

INCOME ACCOUNT—continued.

HEADS OF RECEIPT.				RECEIPTS for Half-year to 31 March 1866.			
		£.	s.	d.	£.	s.	d.
Brought forward - - -				-	-	-	66,519 13 1
NORTHERN ESTATES OF GREENWICH HOSPITAL.							
To RENTS of Farms, Lands, Quarries, Lime and Clay Works, Fisheries, &c. -				-	-	-	17,398 7 2
To INTEREST received on Outlay on New Farm Buildings and Drainage Works -				-	-	-	1,020 15 5
To MISCELLANEOUS RECEIPTS, being the produce of Sale by Auction of the Away-going Crop on Newlands West Farm, as per Agreement - - -				-	-	-	271 16 5
To WOODS (Sales of Produce of) - - - - -				-	-	-	2,777 10 6
To LEAD MINES (Rent of) - - - - -				-	-	-	2,435 7 4

Exchequer and Audit Department,
(Examined) F. A. Hawker, Inspector.

held for the Benefit of Greenwich Hospital, for the Half-year ended 31st March 1866—*continued*.INCOME ACCOUNT—*continued*.

HEADS OF EXPENDITURE.			EXPENDITURE for Half-year to 31 March 1866.		
	£.	s. d.	£.	s. d.	
Brought forward - - -	-	- -	4,508	- 2	
MINES.					
By SALARIES of Moor; Master and Clerk of Ore deliveries; Carriage of, and Charges on, Sale of Lead Ore; Repairs, &c. - - - - -	-	- -	293	- 3	
By REPAYMENT to the Consolidated Fund of the United Kingdom of the Amount certified, by the Commissioners for Auditing the Public Accounts, to have been Expended in 1865-6, out of the Money provided by Parliament on account of Greenwich Hospital, in accordance with the 51st Section of Act 28 & 29 Vict. c. 89, viz. :					
Establishment at the Admiralty; Office of the Comptroller of the Greenwich Hospital Estate and Solicitor, and Greenwich Household and Infirmary - - - - -	25,757	17 1			
Greenwich Hospital School - - - - -	11,623	3 5			
Ditto - Pensions to Flag and other Officers - - - - -	95	1 3			
Ditto - Pensions and Allowances to Seamen, &c. - - - - -	20,504	17 7			
Ditto - Gratuities to Widows of Seamen and Marines Slain, Killed, or Drowned in the Service of the Crown - -	393	17 11			
By TRANSFER to the Consolidated Fund of the United Kingdom of the proportionate part for the Half-year ended 31st March 1866, at the rate of 15 $\frac{1}{2}$ per head per annum on the number of Men (1,010), by which the average number of the Inmates of Greenwich Hospital during that Half-year fell short of 1,400 men; in accordance with the 51st section of Act 28 & 29 Vict. c. 89 -	7,575	- -			
TOTAL AMOUNT Paid to the CONSOLIDATED FUND - - -	-	- -	65,949	17 3	
By AMOUNT Transferred to Capital Account for Investment in Consolidated 3 per Cent. Annuities, being the proportion of annual surplus balance of Income, directed by the Lords Commissioners of the Admiralty to be invested - - - - -	-	- -	5,000	- -	
			75,750	17 8	
BALANCE ON INCOME ACCOUNT - - -	-	- -	14,672	12 3	
	£		90,423	9 11	

Admiralty, 19 August 1867.

(signed) *J. Beeby*,
Accountant General of the Navy.

ABSTRACT ACCOUNT showing the RECEIPT and EXPENDITURE of the LORDS COMMISSIONERS of the ADMIRALTY, from 1st October 1865 to 31st March 1866, on account of Vote 18, GREENWICH HOSPITAL (per Appropriation Act).

Dr.		Cr.	
To Amount Granted for the Service of the Year 1865-66, as per Section 12, Act 28 & 29 Vict. Cap. 123			
£.	s. d.	£.	s. d.
63,915	- -	-	408 11 1
		-	250 - -
By EXPENDITURE from 1st October 1865 to 31st March 1866, viz.:			
Establishment at Admiralty		-	- - -
Office of Comptroller of Greenwich Hospital Estates		-	- - -
HOUSEHOLD AND INFIRMARY.			
Salaries		3,976	- - -
Rents, Rates, Taxes, &c.		244	2 6
Contingencies		1,133	2 1
Money Allowances to In-Pensioners		1,729	1 9
Wages to Labourers, &c.		3,817	5 -
Wages to Police		358	11 -
New Works, &c.		2,725	1 10
Provisions Purchased		4,816	9 5
Allowances in lieu of Provisions to In-Pensioners		96	9 -
Stores Purchased and Repaired		3,965	8 2
Medicines Purchased		192	3 4
Surgical Instruments		61	9 -
Miscellaneous Disbursements		1,311	18 8
Superannuation Allowances to Clerks, Nurses, &c.		672	4 3
		25,099	6 -
SCHOOL AND SCHOOL INFIRMARY.			
Salaries		1,768	- 9
Rents, Rates, Taxes, &c.		216	3 3
Contingencies		405	3 -
Wages to Labourers, &c.		1,561	5 10
New Works, &c.		496	14 9
Provisions Purchased		3,567	10 7
Stores Purchased and Repaired		3,388	16 2
Allowances in lieu of Outfit to Greenwich School Boys		152	12 -
Superannuation Allowances to Masters, &c.		66	17 1
		11,623	3 5
Pensions to Flag and other Officers		-	95 1 3
Pensions and Allowances to Seamen, &c.		-	20,504 17 7
Gratuities to Widows of Seamen, &c.		-	393 17 11
		58,374	17 3
		5,540	2 9
		63,915	- -
By BALANCE of the Grant for 1865-66, unexpended on 31st March 1866		-	- - -
		£.	£.

Exchequer and Audit Department,
(Examined) F. A. Hawker, Inspector.

(signed) J. Beeby,
Accountant General of the Navy.

REPORT of the COMPTROLLER and AUDITOR GENERAL on the ACCOUNTS of GREENWICH HOSPITAL, for the Half-year ended 31st March 1866, in pursuance of the provisions of the Act 28 & 29 Vict. c. 89, s. 49.

Exchequer and Audit Department,
18 March 1868.

UNDER the 47th Section of the Act 28 & 29 Vict. c. 89, the Accountant General of the Navy is required to prepare annually and to submit to the Exchequer and Audit Department, for audit, Accounts of the Receipt and Expenditure of the Capital and Income derived from the lands and property held for the benefit of Greenwich Hospital, and the Exchequer and Audit Department is required to audit the same, as nearly as may be, in like manner as the accounts rendered by the Commissioners of Woods, Forests, and Land Revenues are audited.

Again, under the 48th Section of the same Act, the accounts of all money provided by Parliament for any of the purposes of the said Act, are to be audited and allowed in the same manner as the accounts of money granted and expended for Naval services.

It appears to me, that the proper construction to be put upon the above provisions of the Act, is the following:—

1st. That the Capital and Income Accounts of Greenwich Hospital, like those of the Land Revenues of the Crown, referred to in the 47th Section of the Act, should embrace only the sums actually received and paid within the period of the account.

And 2nd. That the Account of Expenditure out of money provided by Parliament should be confined to the expenses actually defrayed within the period of the account, in the same manner as the accounts of money granted and expended for Naval services.

The Capital and Income Accounts, referred to under the first head, have not been in my opinion, prepared in accordance with the obvious meaning of the 47th Section of the Act, inasmuch as they contain, both on the debit and credit sides of the accounts, transactions which did not take place within the period to which the accounts relate; and the balances of stock and cash are not the true balances which existed on the Capital and Income Accounts on the day (31st March 1866) on which the accounts terminate.

The account referred to under the 2nd Head, namely, that relating to the Expenditure out of the Vote of Parliament, has, however, been prepared according to the requirements of the Act, and embraces only the payments made within the period of the account; and the balance of 5,540 *l.* 2 *s.* 9 *d.* is the true balance which remained unexpended on the 31st March 1866, the date to which the account extends.

The accounts thus referred to this Department for audit, have been prepared on different principles. I cannot admit that such was the intention of Parliament; the meaning of the two Sections of the Act is rendered clear by the reference contained in them to the accounts of the Land Revenues of the Crown, and to those of the Grants for Naval Services; these accounts are all prepared on the same principle, and the Sections 47 and 48 of the Act referred to, require, distinctly, that the Greenwich Accounts shall be prepared and audited in like manner.

I annex to this Report Amended Statements of the Capital and Income Accounts in the form in which they ought, in my opinion, to be prepared, under the provisions of the Act of Parliament.

CAPITAL ACCOUNT.

I now proceed to offer the following remarks upon the detailed items of the Capital Account of Greenwich Hospital.

After excluding from the debit and credit sides of the account those items which do not belong to the period of the account, it appears to me necessary to refer to the following charges:

The first item on the credit side of the capital account is a sum of 147,710 *l.* 9 *s.* 6 *d.* for the purchase of annuities for retired officers of the Hospital. In ordinary cases, annuities and pensions are charges strictly payable out of income, or if advanced out of capital, the future income should be liable for the repayment of the advance by such instalments as it could conveniently bear; the course adopted in charging the purchase of the annuities to capital is, however, authorised by the 12th section of the Greenwich Hospital Act (28 & 29 Vict. c. 89), and my only object in directing attention to this charge is to suggest, for consideration, whether it may not be advisable that provision should be made for replacing at a future time the funded property of the Hospital so expended.

The next charge on the credit side of the capital account, is one of 1,168 *l.* 3 *s.* 3 *d.* for "Outlay on Northern Estates." This appears to be an expense properly chargeable to income. In the accounts of the Land Revenues of the Crown, similar expenses are charged to capital, but only as advances to be repaid in a specified period, out of income. By the Act 29 & 30 Vict. c. 62, power is granted to the Treasury to direct the cost of

permanent improvements to be defrayed out of the capital of the Land Revenue of the Crown, but under the condition that, in every case, provision shall be made for the complete repayment of principal out of income, within a period not exceeding 30 years. In like manner by an earlier Act, the 26 & 27 Vict. c. 49, Parliament granted authority for the advance out of capital moneys arising from sales, &c., of any of the possessions of the Duchy of Cornwall, of a limited sum for the purpose of permanently improving the possessions of the Duchy by inclosure, or by erecting buildings or executing drainage or other works thereon; but this power was granted by the Act, with an express provision that all sums so advanced should be a charge upon the future Revenues of the Duchy, and be repaid out of the annual income by fixed instalments. I think it right to direct attention to these two Acts affecting estates regulated by special authority of Parliament, because it appears to me that the Greenwich Estates are of a similar nature, and that the capital should not be applied, either finally, or temporarily to income purposes without the authority of Parliament.

The following sale and purchase of Stock in March 1867 have been included in the Capital Account for the period to 31st March 1866; as however they did not take place till the following year, they should be excluded from the Account to which this Report relates, viz. :—

Date.	Amount of Stock.	Cash Received or Paid.
	£. s. d.	£. s. d.
13 March 1867 -	1,283 2 2	Sale - - - 1,168 3 3
2 „ „ -	5,479 9 -	Purchase - 5,000 - -

There is also in the Capital Account a cash receipt of 5,000 *l.* from Income which did not take place till the 1st March 1867, and should not therefore be included in the Capital Account ending on the 31st March 1866.

The corrected balances of cash and stock in the Capital Account, as they existed on the 31st March 1866, will be as follows:—

Cash - - - - -	£. 1,483. 1. 9. instead of	£. 2,651 5 -
Money on loan - - - - -	- - - - -	139,957 4 5
Three per Cent. Consols - - - - -	£. 1,010,212. 7. 8. instead of	1,014,408 14 6
Reduced Three per Cent. Annuities - - - - -	- - - - -	1,520,761 - 8
New Three per Cent. Annuities - - - - -	- - - - -	105,682 10 4
Two-and-a-half per Cent. Annuities - - - - -	- - - - -	8,800 - -

INCOME ACCOUNT.

Under the first head of the Income Account there is a charge of 29 *l.* 7 *s.* 5 *d.* for “small repairs to house property at Greenwich.” There are, strictly speaking, no vouchers for these payments; a certificate from the Captain Superintendent of the Hospital covers large amounts, the greater part of which are charged against the Vote of Parliament for the Hospital, as they relate to the Hospital itself; the remaining sums are charged in the Income Account, as expenses relating to the Estate. The Accountant General of the Navy has been requested to keep in future the expenses relating to the Account of the Vote of Parliament distinct from those relating to the Estate Account, and to support the payments by separate vouchers.

Under the 57th section of the Greenwich Hospital Act (28 & 29 Vict. c. 89) it is provided that all powers, authorities, and duties conferred and imposed on the Admiralty by the Act may be exercised and performed by any two of the Lords Commissioners. The Accounts include many payments which require the authority of their Lordships, and this authority has been signified by the signature of one member only of their Lordships’ Board instead of two.

By the 27th section of the same Act, it is provided that the rents and profits of the lands shall, as and when received, be paid without deduction into the Bank of England to the Cash Account of Her Majesty’s Paymaster General, who shall keep in his books a separate account of the Income of the Hospital, and shall carry thereto the sums so paid in.

The 28th section of the Act provides that the expenses of management and other outgoings shall be defrayed out of the money standing to the credit of the Greenwich Hospital Income Account in the books of the Paymaster General.

During the period of the account ending on the 31st March 1866, the sum received by Sub-Accountants in respect of rents and profits of the Estates, amounts to 26,823 *l.* 16 *s.* 7 *d.*; of this amount, a sum of 18,000 *l.* only has been paid to the Paymaster General’s Cash Account at the Bank. The expenses of management and other outgoings have been defrayed out of the sums remaining in the hands of the Receivers, and the net revenue only, after deduction of such charges, has been paid into the Bank of England to the credit of the Paymaster General’s Cash Account.

There

There is clearly an informality in the course adopted with regard to the payment of the rents and profits of the Estates to the Paymaster General's Account.

The Accountant General of the Navy has explained that the course pursued, namely, that of using local receipts to meet local payments, is one of economy and convenience to the Public Service, and that it is, moreover, consistent with the established practice of the Department in dealing with other naval moneys. I am not disposed to question the soundness of these reasons, but I am satisfied that the provisions of the Act can be practically adhered to without disturbing the arrangements made for effecting these local payments. The object which the provisions of the 27th and 28th sections of the Act are intended to accomplish, appear to me to be that the Income Account to be kept in the Paymaster General's Books shall contain a record of the "rents and profits of the land, without deduction," and of the gross "expenses of management of the lands," and "all necessary and proper outgoings in respect thereof." I suggest that this record of the gross receipts and gross payments should be secured by transferring, in the accounts of the Paymaster General at the Bank, and in his books, the amount of the local payments in question, so as to place on record, in the proper accounts, the gross instead of the net receipts and payments.

The items of expenditure to be expunged from the Income Account to the 31st March 1866, as not belonging to the period of the account, are the following, viz. :—

	£.	s.	d.
1st. Repayment to the Consolidated Fund of amount expended out of the Vote of Parliament for Greenwich Hospital, made on the 13th February 1867 - - - - -	58,374	17	3
2nd. Payment of Capitation Money, per Act 28 & 29 Vict. c. 89, s. 51, made on the 13th February 1867 - - -	7,575	-	-
3rd. Payment to Capital Account for Investment, made on 1st March 1867 - - - - -	5,000	-	-
	£. 70,949	17	3

The corrected balance of cash on the Income Account on the 31st March 1866 was as follows:—

	£.	s.	d.
In the hands of the Paymaster General - - - - -	79,835	13	4
In the hands of Sub-Accountants - - - - -	5,786	16	2
	£. 85,622	9	6

In answer to an inquiry from this Department as to the propriety of investing a portion of this large balance, pending the settlements of the Accounts, the Accountant General of the Navy has stated that "70,000 *l.*, part of the Income Balance in the hands of the Paymaster General on 31st March 1866, was temporarily invested in Consols on 26th April 1866," by order of the Board of Admiralty.

On referring to the accounts for 1866-7, it is found that the sum in question was invested, as stated, in the purchase of Three per Cent. Consols, amounting to 80,402 *l.* - *s.* 3 *d.*, not on account of Income, to which the money strictly belonged, but on account of Capital, to which it had no reference whatever. As, however, the transaction took place in the year 1866-7, I will postpone my remarks on the subject of this investment until the accounts for that year come under review.

The account showing the receipt and expenditure for Services provided for by the Vote of Parliament has been duly examined and found correct, and the balance of 5,540 *l.* 2 *s.* 9 *d.* forms part of the saving of 187,923 *l.* 13 *s.* surrendered in 1866-7, as shown in the Finance Accounts for that year. (*See Parliamentary Paper, No. 407, of the year 1867-8, page 73.*)

I cannot close this Report without referring to the delay which has taken place in the completion of the audit of the accounts to which it relates. The Capital and Income Accounts for the period to the 31st March 1866 were not rendered to this office until the 21st August 1867, and the vouchers relating to them were not furnished until the 23rd November 1867.

The account relating to the voted Services for the same period was not received until the 23rd November 1867.

The examination of these accounts was completed in December 1867, and the last of the 45 queries raised upon the examination of them was not answered until the 28th February 1868. This explanation seems necessary to show that no undue delay has taken place in the examination of the accounts by this Department.

Wm. Dunbar,
Comptroller General of the Receipt and Issue of Her Majesty's
Exchequer, and Auditor General of Public Accounts.

the CAPITAL held for the Benefit of GREENWICH HOSPITAL, for the Half-Year ended 31st March 1866.

EXPENDITURE.				CASH.		LOANS.		STOCK.	
	£.	s.	d.	£.	s.	£.	s.	£.	s.
By PURCHASE of ANNUITIES to Officers and others of the Hospital; viz.:									
For transfer, on 7th October 1865, to the Commissioners for the Reduction of the National Debt - - - - -	146,642	1	7						
For transfer, on 19th December 1865 - - -	1,068	7	11						
				147,710	9	6			
By OUTLAY on NORTHERN ESTATES:									
New Farm Buildings, &c., stipulated for on renewal of Leases - - - - -	797	17	8						
Additional Farm Buildings, and Drainage of Land (Tenants paying 5 per Cent. on the outlay) - - - - -	370	5	7						
				1,168	3	3			
By STOCK purchased in the £.3 per Cent. Consolidated Annuities; viz.:									
On 15th January 1866, of £.2,269. 6. 10. Stock, at 87½ - - - - -	1,980	-	-						
				1,980	-	-			
By LOANS Repaid to the HOSPITAL:									
For Cash received in redemption thereof, as per contra - - - - -	4,631	5	-						
By LOANS written off in part:									
For difference between the Sum received and the Amount of the Loan thereby paid off, viz., 55 per Cent., on the Loan to the Trustees of Alston Roads - - - - -	244	8	10						
				-	-	4,875	13	10.	
By CASH:									
For Stock sold, as per contra, on 7th October 1865 - - - - -	164,535	5	10						
Ditto, on 19th December 1865 - - - - -	1,224	10	6						
(Producing £.147,710. 9. 6. cash, as per contra).				-	-	-	-	165,759	16 4
				150,858	12	9	4,875	13	10
								165,759	16 4
BALANCES ON CAPITAL ACCOUNT - - -				1,483	1	9	139,957	4	5
				£.	152,341	14	6	144,832	18 3
								2,811,215	15 -

* Consisting of—					£.	s.	d.
3 per Cent. Consols	-	-	-	-	1,010,212	7	8
3 per Cent. Reduced	-	-	-	-	1,520,761	-	8
New 3 per Cent.	-	-	-	-	105,682	10	4
New 2½ per Cent.	-	-	-	-	8,800	-	-
				£.	2,645,455	18	8

STATEMENT prepared in the Exchequer and Audit Department of the RECEIPT and EXPENDITURE
for the Half-year ended

R E C E I P T S.		£.	s.	d.	£.	s.	d.
To BALANCES ON 1st October 1865:							
For Amount remaining to the Credit of the Commissioners of Greenwich Hospital at the Bank of England, transferred to the Cash Account of Her Majesty's Paymaster General - - - - -		8,382	6	-			
For Amount remaining in the hands of the late Cashier of the Hospital -		619	10	11			
For Amount remaining in the hands of the Receiver of the Northern Estates - - - - -		1,194	4	11			
					10,196	1	10
To DIVIDENDS ON FUNDED PROPERTY:							
For half-year to 5 January 1866, on Stock held in the £. 3 per Cent. Consolidated Annuities - - - - -		15,187	10	3			
For half-year to 10 October 1865, on Stock held in the Reduced £. 3 per Cent. Annuities - - - - -		22,811	8	3			
For half-year to 10 October 1865, on Stock held in the New £. 3 per Cent. Annuities - - - - -		1,585	4	9			
For half-year to 5 January 1866, on Stock held in the New £. 2½ per Cent. Annuities - - - - -		110	-	-			
					39,644	3	3
To INTEREST ON LOANS:							
For half-year to 12 January 1866, on Loans to Commissioners for the Exhibition of 1851 - - - - -		1,963	9	5			
Trustees of Greenwich and Woolwich Lower Roads, half-year to 31 December 1865 - - - - -		12	15	8			
On Mortgage of Hartburngrange Estate, half-year to 12 November 1865 -		354	-	-			
					2,330	5	1
To TRANSFER from Consolidated Fund, on 9 February 1866, in lieu of Merchant Seamen's Sixpences (per 4 & 5. Will. 4, c. 34) - - - - -		-	-	-	10,000	-	-
To RENTS of Hospital Property at Greenwich and Isle of Dogs - - - - -		-	-	-	2,919	19	9
To Proportion of FREIGHTAGE on Conveyance of Treasure in Her Majesty's Ships - - - - -		-	-	-	860	14	11
To PROCEEDS of the Sale of old and unserviceable Hospital and School Stores -		-	-	-	148	17	7
To CONSCIENCE MONEY received, as due to the Hospital - - - - -		-	-	-	286	18	4
To MOIETY of FINES and Miscellaneous Receipts - - - - -		-	-	-	132	12	4
To NORTHERN ESTATES of GREENWICH HOSPITAL:							
Rents of Farms, Lands, Quarries, &c. - - - - -		17,398	7	2			
Interest on Outlay for new Farm Buildings and Drainage - - - - -		1,020	15	5			
Miscellaneous Receipts, being Produce of Sale by Auction of away-going Crop on Newlands West Farm - - - - -		271	16	5			
Sales of Produce of Woods - - - - -		2,777	10	6			
Rent of Lead Mines - - - - -		2,435	7	4			
					23,903	16	10
					£.	90,423	9 11

of the INCOME derived from the LANDS and PROPERTY held for the Benefit of GREENWICH HOSPITAL,
31st March 1866.

EXPENDITURE.		£.	s.	d.	£.	s.	d.
By PAYMENTS on account of Property at Greenwich and Isle of Dogs :							
Ground and Fee Farm Rents -	- - - - -	186	8	2			
Rates and Taxes, Commission on Collection of Petty Rents, &c. -	- -	45	16	1			
Small Repairs to House Property at Greenwich -	- - - - -	29	7	5			
Fire Insurance on Property, Expenses of Powers of Attorney on Sale of Stock, Advertisements, &c. -	- - - - -	60	15	9			
					322	7	5
NORTHERN ESTATES OF GREENWICH HOSPITAL.							
LANDS, COLLIERIES, QUARRIES, &c.							
By EXPENSES of Management, Salaries and Contingencies of the Receiver, and Establishment -	- - - - -	-	-	-	1,036	14	11
By OUTLAY for Benefit of the Estates, viz. :							
New Fences, Stone Walls, Embankments, &c. -	- - - - -	257	8	2			
Repairs and Alterations of Farm Buildings, &c. -	- - - - -	266	7	4			
					523	15	6
By DISBURSEMENTS, viz. :							
Tithe Rent Charges -	- - - - -	672	2	5			
Land Tax, Fee Farm, and other Rent Charges -	- - - - -	145	3	4			
Subscriptions to Schools and Charities, &c. -	- - - - -	269	8	7			
Law Charges -	- - - - -	22	4	2			
Retiring Allowances -	- - - - -	360	-	-			
Value of Crop on Newlands West Farm, taken on Valuation -	- - -	298	11	3			
Allowances to Tenants of several Farms for Lime, as per Agreement -	-	110	-	-			
Ditto, in consequence of the Average Price of Wheat in the County having been below 44 s. per Quarter -	- - - - -	92	19	-			
Expenses attending Rent Audits, Fire Insurance Premiums, &c. -	- -	82	3	10			
					2,052	12	7
WOODS.							
By WAGES of Woodkeepers, extra Men planting, felling trees, &c., Fencing, Draining, and Repairs, Nursery Goods, Taxes, Rates, and other Charges -	- - - - -	-	-	-	572	9	9
MINES.							
By SALARIES of Moor Master and Clerk of Ore Deliveries, carriage of, and charges on, Sale of Lead Ore, Repairs, &c. -	- - - - -	-	-	-	293	-	3
BALANCE ON INCOME ACCOUNT :					4,801	-	5
In the hands of Her Majesty's Paymaster General at the Bank of England		79,835	13	4			
In the hands of Sub-Accountants -	- - - - -	5,786	16	2			
					85,622	9	6
					£.	90,423	9 11

REMARKS on the REPORT of the COMPTROLLER and AUDITOR GENERAL, on the
ACCOUNTS of GREENWICH HOSPITAL for the Half-Year ended 31st March 1866.

Admiralty, Somerset House, 27 March 1868.

WITH reference to the remarks of the Comptroller and Auditor General, that the Capital and Income Accounts of Greenwich Hospital, like those of the Land Revenues of the Crown, referred to in the 47th Section of the Greenwich Hospital Act of 1865, should embrace only the sums actually received and paid within the period of the Account, it is to be observed, that upon a query to this effect being raised by the Exchequer and Audit Department, I communicated the following reply, in accordance with the directions of the Lords Commissioners of the Admiralty, viz. :—

By the “Provisions of the 47th Clause of the Greenwich Hospital Act, 1865, it is directed that the Accountant General of the Navy shall annually prepare and submit to the Commissioners for Auditing the Public Accounts, Accounts of the Receipt and Expenditure of the Capital and of the Income derived from the Lands and Property held for the benefit of Greenwich Hospital, and under the 51st Clause of that Act, it is prescribed that, in every year, as soon as may be after the receipt by the Admiralty of the Certificate from the Exchequer and Audit Department, of the Amount expended in that year out of the Money provided by Parliament for Greenwich Hospital and School, Her Majesty’s Paymaster General shall, under the direction of the Admiralty, pay from the Greenwich Hospital Income Account into the receipt of Her Majesty’s Exchequer, a sum, to be carried to and form part of, the Consolidated Fund of the United Kingdom, equal to the amount certified by such Certificate to have been expended in the year to which such Certificate relates, together with a sum equal to 15*l.* per head, on the number of men by which the average number of the inmates of Greenwich Hospital during that year falls short of 1,400.

“From the foregoing quotation from the 47th Clause it will be apparent that it is not obligatory to limit the transactions of the Account to the Receipts and Payments *within* the year, and in order to comply with the requirements of the 51st Clause, it is absolutely necessary, for the settlement of the liabilities connected with each financial year, that certain Receipts and Payments connected therewith should appear in the Account under date subsequent to the termination of the year; inasmuch as the repayment to the Consolidated Fund, out of the Greenwich Hospital Income Account, of the amount expended within the same year on account of the Voted Services of Greenwich Hospital and School, and the Capitation Grant of 15*l.* per head for the same period, cannot, in the case of the former, take place until the Parliamentary Naval Account of Receipt and Expenditure is audited, which cannot well be completed earlier than December in each year, and, as regards the latter, it must also be made after the termination of the Financial year.

“Moreover, the investment of a Surplus Balance of 10,000*l.* in each year, as directed by their Lordships, cannot be made until the extent of the two foregoing liabilities is determined.

“There being, therefore, these special circumstances connected with the Greenwich Hospital Capital and Income Account, which prevent an account of Receipts and Payments within the year being a correct exhibition of the legitimate transactions relating to the year, the Lords Commissioners of the Admiralty are of opinion that the spirit and intention of the Greenwich Hospital Act will only be fulfilled by each year’s account containing the Receipts and Transactions legitimately appertaining to the year, and I am also desired to inform you that the Account of Greenwich Hospital Capital and Income for the year 1866-67, is being prepared in conformity with these views.”

Also, the following answer was returned by me, by direction of the Lords Commissioners of the Admiralty, to a further communication from the Comptroller and Auditor General on this subject.

It being stated by the Comptroller and Auditor General, “that, by the 47th clause of the Greenwich Hospital Act, it is required that the Capital and Income Accounts of Greenwich Hospital shall be audited by the Commissioners for auditing the Public Accounts, as nearly as may be, in like manner as they audit the accounts rendered by the Commissioners of Her Majesty’s Woods, &c.”

It was observed, with reference to this remark, “that no restriction was either expressed, or intended, by their Lordships, as to the extent or nature of the *Audit* to be instituted in the Exchequer and Audit Department, but their observations had entire reference to the principle upon which it appeared to them the Account should be *rendered*.”

It having been further stated by the Comptroller and Auditor General that he considered “that as each year’s account does not contain the whole of the Receipts and Transactions relating to the year, from the circumstance of there being arrears of Rents, therefore the period of the Account should not be extended to embrace the prescribed
annual

annual repayments to the Consolidated Fund of the Actual Charges for each year, together with the Transfers between Capital and Income, and the Investment of the Surplus Balance relating to each year, but that these transactions should be referred to in a note appended to the foot of the Account, without introducing a principle at variance with the mode in which all other Public Accounts are dealt with."

Upon this observation the following reasons were stated for not acquiescing in the view thus taken—

"First.—There is an essential difference between an Income Account omitting in each year special and large transactions appertaining to the year, and yet not including the Rents due for the year, which latter, being as a rule uniform in their amount, cannot practically affect the Revenue of the year, observing, that according to usage, the Rents of the Northern Estates of Greenwich Hospital are collected six months after they become due.

"Second.—Holding this view to be correct, such transactions as repayments to the Consolidated Fund on account of the Voted Service of the Hospital and School, of the Capitation Grant to the Consolidated Fund, of Adjustments between the Capital and Income Accounts, and the Investment out of the Surplus Balance for the year, should, it is considered, form an integral portion of the transactions of the year's account to which they relate, and not be merely indicated by an explanatory note on the face of the account.

"Third.—That from the very nature of these exceptional transactions, as affecting the Capital and Income Account of Greenwich Hospital, it cannot, without vitiating its character as a complete account, be brought under the limitation of confining its scope to the cash transactions within the year."

It was added that "for these reasons, as well as in consideration of those contained in my letter of the 11th January 1868, the Lords Commissioners of the Admiralty adhere to their former decision, as conveyed in that letter, as to the basis upon which the Annual Accounts of the Capital and Income of Greenwich Hospital should be rendered."

The amended statements referred to in the Report of the Comptroller and Auditor General are cash accounts, showing the receipts and payments between the 1st October 1865 and 31st March 1866, and the cash and stock balances on the latter date, prepared in accordance with the views of that department.

The annuities to officers were purchased, as stated, in accordance with the 12th Section of the Greenwich Hospital Act of 1865, out of capital, and it does not appear necessary to replace the capital to the amount of this authorised charge thereon out of income, and thus restrict the beneficent use of the income of Greenwich Hospital for Naval purposes.

With reference to the observation respecting the payment of 1,168 *l.* 3 *s.* 3 *d.* on account of erections of farm buildings, stipulated for on renewal of leases, and additional farm buildings and drainage works, the tenants paying 5 per cent. on the outlay, it is to be observed that when farms fall out of lease, the amount expended during the lease on new farm buildings and drainage is always taken into consideration in negotiating the new rent, which in most cases is greatly increased in consequence of these permanent improvements.

For instance, Shawside Farm and Allotments, which prior to May 1866 was let at 101 *l.*, is now let on lease for 15 years at 180 *l.* per annum.

Cashburn, formerly let for 15 years to May 1866 at 45 *l.*, is now let on lease for 15 years at 200 *l.*

Shield Hill and Cooper's Dyke, former annual rent 58 *l.*, now let for 15 years on lease at 180 *l.*

It is considered that these payments are legitimate charges to capital, inasmuch as they contribute to an increased rental consequent on the permanent improvement of the property, and as the terms of the Greenwich Hospital Act do not require that they should be only so provisionally charged, with the view ultimately of refunding the capital account out of income, it is not considered necessary to disturb the basis upon which these payments have been charged.

An annual investment of 10,000 *l.* was directed to be made, so as to provide for any possible depreciation in the value of the land and mining property, but the rents from lands are increasing, and any possible depreciation in the Royalties from the mines is more than provided for by the Alston Moor Mines Fund, which is now merged into the general capital of Greenwich Hospital.

With reference to the remark that the capital should not be applied either finally or temporarily to income purposes, without the authority of Parliament, it is to be observed that it is considered that the 38th and 39th Clauses of the Greenwich Hospital Act give the Admiralty this power without requiring the intervention of Parliament.

As regards the observation that "the accounts include many payments which require the authority of their Lordships, and this authority has been signified by the signature of one member of the Board, instead of two," I would observe, that the authorities referred to have all been signed either by two members or by the secretary as the organ of the Board, and "by command of their Lordships," and the allowances of the several transactions in the accounts by me have been approved by the Superintending Lord of the Department; but if it be considered necessary, all authorities affecting the capital and income of Greenwich Hospital could be signed by two Lords Commissioners of the Admiralty.

As regards the observation that the record of the gross receipts and gross payments, on account of the rents and profits of the lands, should be secured by transferring, in the accounts of the Paymaster General at the Bank and in his books, the amount of the local payments in question, so as to place on record in the proper accounts the gross instead of the net receipts and payments, the following reply, upon a query being raised, was given by me:

"The practice in the Naval Department is to allow accounting officers provisionally to appropriate money received by them in aid of their expenditure, thereby lessening the demands to be made upon Naval funds by individual applications for imprest moneys, the double entry principle upon which the accounts of Naval Expenditure are kept admitting of this mode of procedure being adopted without interfering with the proper apportionment of such receipts.

"This course has been pursued in reference to moneys received by the Receiver of the Northern Estates, and the Steward of Greenwich Hospital, on account of the Income and Capital transactions of Greenwich Hospital, and it is not considered by the adoption of this course, that the intentions of the framers of the Greenwich Hospital Act of 1865 have been departed from, as the Greenwich Hospital Income Account, referred to in Clause 28, embraces in the Departmental Books of the Admiralty both receipts and payments by the Paymaster General, the Receiver of the Northern Estates, and the Steward of Greenwich Hospital; thus while the convenience of the service has been maintained, the gross receipts on account of lands have been carried to the credit of the Greenwich Hospital Income Account, in the account to be laid before Parliament."

With reference to the remark relative to the temporary investment of 70,000 *l.* on Consols on 26th April 1866, it is to be observed that this temporary investment was on account of income, and that amount of cash will have eventually to be repaid to income when necessary.

The amount of Stock purchased with this 70,000 *l.* is inserted in the Capital Account for 1866-67, and distinctly shown as a *temporary investment*, and the dividends arising therefrom are included in the Income Account, and an explanatory note of the transaction given at the foot of that account.

It is considered that this transaction is properly exhibited in the account to which it relates.

In conclusion, it is to be observed that the delay in the transmission to the Exchequer and Audit Department of the Capital and Income Accounts arose from the lengthened correspondence between that Department, the Treasury and the Admiralty, as to the mode of auditing these accounts, caused by a difference of opinion as to the nature and extent of audit to which these accounts were to be subjected.

The Secretary of the Admiralty.

(signed) *J. Beeby*,
Accountant General of the Navy.

GREENWICH HOSPITAL.

1865-66.

ACCOUNTS of the RECEIPT and EXPENDITURE
of the CAPITAL and of the INCOME derived from
the LANDS and PROPERTY held for the Benefit
of GREENWICH HOSPITAL.

(Presented in pursuance of Act 28 & 29 VIC. c. 89,
s. 47 and 49.)

Ordered, by The House of Commons, to be Printed,
31 March 1868.

187-

Under 2 os.

GREENWICH HOSPITAL.

1866-67.

ACCOUNTS of the RECEIPT and EXPENDITURE of the CAPITAL and of the
INCOME derived from the LANDS and PROPERTY held for the Benefit
of GREENWICH HOSPITAL.

Admiralty, }
24 July 1868. }

N. HOUGHTON,
Pro Chief Clerk.

(Presented in pursuance of Act 28 & 29 Vict. c. 89, ss. 47 and 49.)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

AN ACCOUNT of the RECEIPT and EXPENDITURE of the CAPITAL held for the

CAPITAL ACCOUNT.

R E C E I P T S.	C A S H.		Money on Loan.	S T O C K.		
				Reduced 3 per Cent. Annuities. New 3 per Cent. Annuities. New 2½ per Cent. Annuities.	Consolidated 3 per Cent. Annuities.	Shares in Hexham and Allendale Railway Company.
To BALANCES, per preceding Account, to 31st March 1866, viz.:	£.	s. d.	£.	s. d.	£.	s. d.
To Balance on Her Majesty's Paymaster General's Capital Account - - - - -	-	-	2,651	5	-	-
To STOCK in the following Funds, viz.:	-	-	-	-	-	-
3 per Cent. Consolidated Annuities - - - - -	-	-	-	-	1,014,408	14 6
3 per Cent. Reduced Annuities - - - - -	1,520,761	- 8	-	-	-	-
New 3 per Cent. Annuities - - - - -	105,682	10 4	-	-	-	-
New 2½ per Cent. Annuities - - - - -	8,800	-	-	-	-	-
To LOANS granted by the late Commissioners of Greenwich Hospital, outstanding, viz.:	-	-	-	1,635,243	11	-
Trustees of Greenwich and Woolwich Lower Roads (balance) - - - - -	898	9 2	-	-	-	-
Trustees of Alston Roads (balance) - - - - -	25,348	15 3	-	-	-	-
Commissioners for the Exhibition of 1851 (balance) - - -	65,710	-	-	-	-	-
Loan on Mortgage of Hartburn Grange Estate - - - - -	18,000	-	-	-	-	-
To PRODUCE of SALE of STOCK in CONSOLIDATED 3 per Cent. ANNUITIES, viz.:	-	-	-	139,957	4 5	-
On 25th June 1866, of - - - - -	5,655	18 6	-	-	-	-
On 24th December 1867, of - - - - -	15,302	- 6	-	-	-	-
£. 21,457 19 -	-	-	* 19,450	2 10	-	-
To INSTALMENTS of LOANS repaid, viz.:	-	-	-	-	-	-
On 12th April 1866 by Commissioners for Exhibition of 1851 - - - - -	1,155	- -	-	-	-	-
On 16th May 1866 by Commissioners for Exhibition of 1851 - - - - -	1,650	- -	-	-	-	-
On 29th June 1866 by Commissioners for Exhibition of 1851 - - - - -	1,030	- -	-	-	-	-
On 19th July 1866 by Commissioners for Exhibition of 1851 - - - - -	350	- -	-	-	-	-
On 12th September 1866 by Commissioners for Exhibition of 1851 - - - - -	1,030	- -	-	-	-	-
On 1st February 1867, by Commissioners for Exhibition of 1851 - - - - -	1,155	- -	-	-	-	-
On 25th March 1867 by Commissioners for Exhibition of 1851 - - - - -	1,900	- -	-	-	-	-
On 21st November 1866 by Trustees of Alston Roads - - -	100	- -	8,370	- -	-	-
To PROVISIONAL INVESTMENT of the Surplus Floating Balance on the Greenwich Hospital Income Account in Con- solidated 3 per Cent. Annuities on 26th April 1866 - - -	70,000	- -	-	-	-	-
To PROVISIONAL INVESTMENT of the Surplus Floating Balance on the Greenwich Hospital Income Account in Con- solidated 3 per Cent. Annuities on 29th March 1867 - - -	70,000	- -	† 140,000	- -	-	-
To TRANSFER from Income Account on 18th January 1868, being Annual Investment out of Greenwich Hospital Surplus Income, as per contra - - - - -	-	-	10,000	- -	-	-
To STOCK Purchased, as per contra:	-	-	-	-	-	-
On 26th April 1866 - - - - -	80,402	- 3	-	-	-	-
On 29th March 1867 - - - - -	76,659	16 5	-	-	-	-
On 3rd May 1866 - - - - -	4,381	5 10	-	-	-	-
On 29th May 1866 - - - - -	1,888	8 3	-	-	-	-
On 5th July 1866 - - - - -	3,953	18 4	-	-	-	-
On 31st July 1866 - - - - -	396	12 -	-	-	-	-
On 19th September 1866 - - - - -	1,152	9 -	-	-	-	-
On 4th January 1867 - - - - -	110	6 10	-	-	-	-
On 8th February 1867 - - - - -	1,209	4 7	-	-	-	-
On 18th January 1868 - - - - -	10,759	18 6	-	-	-	-
To RECEIPT from Sale of Property at Greenwich - - - - -	-	-	2,400	- -	-	-
To SHARES purchased in Hexham and Allendale Railway Company - - - - -	-	-	-	-	-	10,000 - -
£.	182,871	7 10	139,957	4 5	1,635,243	11 -
					1,195,382	14 2
						10,000 - -

• Purchase of an Annuity - - - - -	£.	s. d.
Outlay in Northern Estates - - - - -	4,864	1 10
Purchase of Shares in Hexham and Allendale Railway Company - - -	4,096	1 -
Purchase of Land at Randolpholme - - - - -	10,000	- -
	800	- -
£.	19,450	2 10

† See Explanatory Note on Income Account.

Exchequer and Audit Department,

(Examined) H. T. D. Bathurst, Inspector.

Benefit of GREENWICH HOSPITAL, for the Year ended 31st March 1867.

CAPITAL ACCOUNT.

P A Y M E N T S.	C A S H.	Money on Loan.	S T O C K.		
			Reduced 3 per Cent. Annuities. New 3 per Cent. Annuities. New 2½ per Cent. Annuities.	Consolidated 3 per Cent. Annuities.	Shares in Hexham and Allendale Railway Company.
By PURCHASE of an ANNUITY for an Officer of Greenwich Hospital, viz.:	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
For Transfer on 25th June 1866 to the Commissioners for the Reduction of the National Debt, as per contra -	- - -	4,864 1 10			
By OUTLAY on the NORTHERN ESTATES, viz.:					
New Farm Buildings, &c., stipulated for on renewal of Leases - - - - -	1,456 4 9				
Additional Farm Buildings and Drainage Works (Tenants paying 5 per cent. on the Outlay) - - - - -	2,629 16 3	4,086 1 -			
By STOCK purchased in the Consolidated 3 per Cent. Annuities, viz.:					
On 26th April 1866, of - - - - - £. s. d.					
Stock at 87 - - - - -	80,402 - 3	70,000 - -			
On 29th March 1867, of - - - - -	76,659 16 6	70,000 - -			
Stock at 91½ - - - - -					
On 3rd May 1866, of - - - - -	4,381 5 10	3,806 5 -			
Stock at 86½ - - - - -					
On 29th May 1866, of - - - - -	1,888 8 3	1,650 - -			
Stock at 87½ - - - - -					
On 5th July 1866, of - - - - -	3,953 18 -	3,430 - -			
Stock at 86½ - - - - -					
On 31st July 1866, of - - - - -	396 12 -	350 - -			
Stock at 88½ - - - - -					
On 10th September 1866, of - - - - -	1,152 9 -	1,030 - -			
Stock at 89½ - - - - -					
On 4th January 1867, of - - - - -	110 6 10	100 - -			
Stock at 90½ - - - - -					
On 8th February 1867, of - - - - -	1,269 4 7	1,155 - -			
Stock at 90½ - - - - -					
On 18th January 1868, of - - - - -	10,759 18 6	10,000 - -			
Stock at 92½ - - - - -					
£. 180,973 19 8		161,521 5 -			
By LOANS repaid to Greenwich Hospital for Cash received in redemption thereof, as per contra, viz.:					
Commissioners for Exhibition of 1851 - - - - -	8,270 - -				
Trustees of Alston Roads - - - - -	100 - -	8,370 - -			
By LOANS Written off in part:					
For Difference between the Sum received and the Amount of the Loan thereby paid off: 55 per cent. on the Loan to the Trustees of Alston Roads, as per contra - - -	- - -	122 4 5			
By STOCK sold, as per contra:					
On 25th June 1866 - - - - -	5,655 18 6				
On 24th December 1867 - - - - -	15,802 - 6			21,457 19 -	
By PURCHASE of SHARES in Hexham and Allendale Railway Company, as per contra - - - - -		10,000 - -			
By PURCHASE of LAND at Randalholme, as per contra - - -		500 - -			
		180,971 7 10	8,492 4 5	21,457 19 -	
BALANCE ON CAPITAL ACCOUNT - - -	1,900 - -	131,465 - -	1,685,243 11 -	1,173,924 15 2	10,000 - -
£.	182,871 7 10	132,957 4 5	1,685,243 11 -	1,195,382 14 2	10,000 - -

Admiralty, Somerset House,
13 February 1868.(signed) J. Beeby,
Accountant General of the Navy.

AN ACCOUNT of the RECEIPT and EXPENDITURE of the INCOME derived from the LANDS and

INCOME ACCOUNT. - - - - -

HEADS OF RECEIPT.			RECEIPTS for the Year 1866-67.		
	£.	s. d.	£.	s. d.	
To BALANCE per preceding Account to 31 March 1866 - - - - -	-	-	14,672	12	3
To DIVIDENDS ON FUNDED PROPERTY:					
For Dividends received on Stock held in the 3 per Cent. Consolidated Annuities - - - - -	32,904	4 6			
Reduced 3 per Cent. Annuities - - - - -	45,622	10 6			
New 3 per Cent. Annuities - - - - -	3,170	9 6			
New 2½ per Cent. Annuities - - - - -	220	- -			
			81,917	10	6
To INTEREST ON LOANS:					
For Amount received on Loans granted to the undermentioned, viz.:					
Commissioners for the Exhibition of 1851 - - - - -	3,513	10 8			
Trustees of Greenwich and Woolwich Lower Roads - - - - -	22	1 10			
Sir W. C. Trevelyan, Bart., on Mortgage of Hartburn Grainge Estate -	708	- -			
			4,243	12	6
To TRANSFERS from Consolidated Fund in lieu of Merchant Seamen's Sixpences (4 & 5 Will. 4, c. 34) - - - - -	-	-	20,000	-	-
To RENTS of Hospital Property at Greenwich and in Isle of Dogs - - -	-	-	4,385	13	9
To PROPORTION of Freightage on conveyance of Treasure in Her Majesty's Ships - - - - -	-	-	2,404	1	6
To PROCEEDS of the Sale of old and unserviceable Hospital and School Stores -	-	-	1,512	19	2
To PER-CENTAGE on Greenwich Hospital Furniture, for its use - - - - -	-	-	49	12	7
To MISCELLANEOUS RECEIPTS - - - - -	-	-	37	13	3
Carried forward - - -	£.		120,223	17	6

PROPERTY held for the Benefit of GREENWICH HOSPITAL, for the Year ended 31st March 1867.

- - - - - INCOME ACCOUNT.

HEADS OF EXPENDITURE.		EXPENDITURE for the Year 1866-67.
	£. s. d.	£. s. d.
By PAYMENTS on account of Property at GREENWICH and ISLE of DOGS, viz.:		
Ground-rent of Land in Isle of Dogs, and Fee Farm Rents - - -	356 - 1	
Rates and Taxes on House Property in Greenwich, Commission on Petty Rents, &c. - - - - -	128 2 11	
Repairs to House Property at Greenwich - - - - -	108 6 1	
Fire Insurance on Property, and Miscellaneous Disbursements - -	48 6 9	
		640 15 10
NORTHERN ESTATES OF GREENWICH HOSPITAL.		
LANDS, COLLIERIES, QUARRIES, &c.		
By EXPENSES of MANAGEMENT, viz.:		
Salaries and Contingencies of the Receiver of the Northern Estates and Establishment - - - - -	2,039 8 4	
By OUTLAY for the Benefit of the Estates, viz.:		
New Fences, Stone Walls, Embankments, &c. - - - - -	1,173 5 6	
Repairs and Alterations of Farm Buildings, &c. - - - - -	1,137 11 3	
By DISBURSEMENTS under the following Heads, viz.:		
Law Charges - - - - -	40 1 4	
Land Tax, Fee Farm, and other Rent-charges - - - - -	53 8 4	
Retiring Allowances - - - - -	720 - -	
Tithe Rent-charges - - - - -	878 7 5	
Subscriptions to Schools and Charities, including Stipends - - -	395 6 -	
Improvement of Pasture Land, and Miscellaneous Charges on Lands, Collieries, &c. - - - - -	838 15 -	
WOODS.		
By WAGES of Woodkeepers, Extra Men planting, Felling Trees, Fencing, Draining Plantations, and Repairs, Nursery Goods, Taxes, Rates, and other charges - - - - -	1,535 7 8	
MINES.		
By Salaries of Moor Master, and Clerk of Ore Deliveries, Carriage of, and Charges on Sales of, Lead Ore, Repairs, &c. - - - - -	461 10 3	
		9,273 1 1
Carried forward - - - £.		9,913 16 11

INCOME ACCOUNT—continued.

HEADS OF RECEIPT.		RECEIPTS for the Year 1866-67.	
	£. s. d.	£. s. d.	
Brought forward - - -	- - -	129,223 17 6	
NORTHERN ESTATES OF GREENWICH HOSPITAL.			
To RENTS of Farms, Lands, Collieries, Quarries, Lime and Clay Works, Fisheries, &c. - - - - -	35,777 18 11		
To INTEREST received on Outlay on New Farm Buildings and Drainage Works -	1,977 11 5		
To WOODS (Sales of Produce of) - - - - -	5,377 2 8		
To MINES (Produce of) - - - - -	7,768 16 -		
To MISCELLANEOUS RECEIPTS - - - - -	10 1 4		
		50,911 10 4	
			£. 180,135 7 10

Exchequer and Audit Department,
(Examined) *H. T. D. Bathurst*, Inspector.

held for the Benefit of Greenwich Hospital, for the Year ended 31st March 1867—continued.

INCOME ACCOUNT—continued.

HEADS OF EXPENDITURE.			EXPENDITURE for the Year 1866-67.		
	£.	s. d.	£.	s. d.	
Brought forward - - -	-	- -	9,913	16 11	
MISCELLANEOUS CHARGES.					
By EXPENSES in obtaining the Greenwich Hospital Act of 1865, and Power of Attorney on Transfer of Stock - - - - -	428	14 -			
By PROVISIONS for Soup for Pensioners' Families - - - - -	8	3 3			
By COSTS in Court of Chancery, <i>in re</i> Sirdefield Estate, and release of Covenant with Mr. Watson - - - - -	66	14 2			
By DONATION to School for Children of In-Pensioners - - - - -	100	- -			
By GRANT towards Relief of Destitute Widows of In-Pensioners - - - - -	20	- -	623	11 5	
By AMOUNT repaid to the Consolidated Fund of the United Kingdom, certified by the Exchequer and Audit Department to have been expended in 1866-67, out of the Money provided by Parliament, on account of Greenwich Hospital, in accordance with the 51st Section of Act 28 & 29 Vict. c. 89, viz.:					
Establishment at the Admiralty - - - - -	1,261	12 6			
Office of the Comptroller of the Greenwich Hospital Estate and Solicitor - - - - -	1,493	7 -			
Greenwich Household and Infirmary - - - - -	40,213	5 8			
Greenwich School - - - - -	21,630	6 10			
Greenwich Pensions to Flag and other Officers - - - - -	3,698	10 6			
Ditto - and Allowances to Seamen, &c. - - - - -	46,509	11 1			
Greenwich Hospital Gratuities to Widows of Seamen and Marines Slain, Killed, or Drowned in the Service of the Crown - - - - -	638	15 -			
	115,445	8 7			
By AMOUNT transferred to the Consolidated Fund of the United Kingdom, for the Year ended 31st March 1867, being a sum equal to 15 <i>l.</i> per head on the number of Men (1,032), by which the average number of the Inmates of Greenwich Hospital during that Year fell short of 1,400 men, in accordance with the 51st section of Act 28 & 29 Vict. c. 89 - - - - -	15,480	- -			
TOTAL AMOUNT Paid to the CONSOLIDATED FUND - - - - -	-	- -	130,925	8 7	
By AMOUNT Transferred to Capital Account for Investment in Consolidated 3 per Cent. Annuities, being the amount of surplus Income directed by the Lords Commissioners of the Admiralty to be annually invested - - - - -	-	- -	10,000	- -	
			151,462	16 11	
By BALANCE ON INCOME ACCOUNT - - - - -	-	- -	28,672	10 11	
	£.		180,135	7 10	

Note.—As the repayments to the Consolidated Fund on account of the Voted Service of Greenwich Hospital and School, and the payment of 15*l.* per head on the difference between the number of inmates of the hospital and 1,400 men are not to be made until the certificate is rendered by the Exchequer and Audit Department, as prescribed by the 51st section of the Greenwich Hospital Act, 1865, and therefore several months subsequent to the end of each financial year, the sum of 140,000*l.* has been temporarily invested in the Consolidated Three per Cent. Annuities, out of the accumulated Greenwich Hospital Income Receipts, by order of the Lords Commissioners of the Admiralty. (*See Capital Account.*)

Admiralty, 13 February 1868.

(signed) J. Beeby,
Accountant General of the Navy.

ABSTRACT ACCOUNT showing the RECEIPT and EXPENDITURE of the LORDS COMMISSIONERS of the ADMIRALTY, between 1st April 1866 and 31st March 1867, on account of GREENWICH HOSPITAL (per Appropriation Act).

Dr.

To Amount Granted for the Services of the Year 1866-67, as per Section 26, Act 29 & 30 Vict. cap. 91 - - -

£. s. d.
125,367 - -

By EXPENDITURE from 1st April 1866 to the 31st March 1867, viz.:
Establishment at Admiralty - - - - -
Office of Comptroller of Greenwich Hospital Estate and Solicitor

£. s. d.
1,261 12 6
1,493 7 -

HOUSEHOLD AND INFIRMARY.

Salaries - - - - -
Rents, Taxes, and Gas - - - - -
Contingencies - - - - -
Wages - - - - -
Repairs and Maintenance of Buildings - - - - -
Provisions, Clothing, Bedding, and Stores - - - - -
Medicines and Surgical Instruments - - - - -
Superannuation Allowances - - - - -
Miscellaneous Disbursements - - - - -

£. s. d.
7,172 17 8
1,402 4 1
1,978 3 8
8,940 1 8
4,920 10 5
10,114 1 8
489 4 3
1,617 6 8
552 13 9

37,182 3 10

SCHOOL AND SCHOOL INFIRMARY.

Salaries - - - - -
Rates, Taxes, and Gas - - - - -
Contingencies - - - - -
Wages - - - - -
Repairs and Maintenance of Buildings - - - - -
Provisions, Clothing, Bedding, and Stores - - - - -
Medicines and Surgical Instruments - - - - -
Superannuation Allowances - - - - -

£. s. d.
3,540 10 5
562 18 7
2,085 2 1
3,409 15 6
1,313 5 3
10,531 14 5
237 - 7

21,630 6 10

Money Allowances to In-Pensioners - - - - -
Pensions to Flag and other Officers - - - - -
Pensions to Seamen - - - - -
Gratuities to Widows of Seamen - - - - -

£. s. d.
3,031 1 10
3,698 10 6
46,509 11 1
638 15 -

115,445 8 7

By BALANCE of the Grant for 1866-67, unexpended on the 31st March 1867 - - -

9,921 11 5

£. 125,367 - -

£.

125,367 - -

Exchequer and Audit Department,
(Examined) H. T. D. Bathurst, Inspector.

(signed) J. Beeby,
Accountant General of the Navy.

REPORT of the COMPTROLLER and AUDITOR GENERAL on the ACCOUNTS of GREENWICH HOSPITAL, for the Year ended 31st March 1867, prepared in pursuance of the provisions of the Act 28 & 29 Vict. c. 89, s. 47.

Exchequer and Audit Department,
22 July 1868.

THE Accounts of the Capital and of the Income of Greenwich Hospital for the year ended the 31st March 1867, have been prepared and rendered in the same manner as those for the half-year ended the 31st March 1866, that is, they do not contain sums actually received and paid within the period of the account (such sums having been included in the accounts for the preceding period), and they do contain sums received and paid in the following year 1867-8.

The remarks in my Report of the 18th March 1868, on the account ended the 31st March 1866, and, as to the incorrectness of the balances of stock and cash on the termination of the account, apply also to the Accounts of the Capital and Income now reported upon.

I annex to this Report amended statements of the Accounts of Capital and Income, in the form in which they ought in my opinion to have been prepared under the provisions of the Act of Parliament.

From these statements, the following differences appear in the Balances:—

CAPITAL.						£.	s.	d.
Excess of Payments over Receipts	-	-	-	-	-	12,686	1	-
Instead of a Balance of Cash of	-	-	-	-	-	1,900	-	-
Balance of Stock	-	-	-	-	-	2,657,148	11	6
Instead of -	-	-	-	-	-	2,809,168	6	2

INCOME.						£.	s.	d.
Balance of Cash	-	-	-	-	-	29,597	19	6
Instead of -	-	-	-	-	-	28,672	10	11
Temporary Investment of Stock (included in Capital in the Account as rendered)	-	-	-	-	-	157,061	16	8

The Account of the Expenditure of the Money Voted by Parliament has been prepared in accordance with the requirements of the Act, and embraces only the payments within the year.

The amount of such payments, viz., 115,445 l. 8 s. 7 d., has been paid out of the Income of Greenwich Hospital into Her Majesty's Exchequer on the 31st December 1867, and the unexpended balance of the Vote, viz., 9,921 l. 11 s. 5 d., has also been surrendered.

CAPITAL ACCOUNT.

The second item in the Capital Account is a charge of 4,086 l. 1 s. for "Outlay on Northern Estates," upon which I have to refer to my Report above mentioned as to a similar charge on capital in the preceding year.

INCOME ACCOUNT.

The income derived from the Northern Estates of the Hospital appears in the account to be 50,911 *l.* 10 *s.* 4 *d.* In addition to this sum, however, sales of produce took place to the amount of 5,256 *l.* 10 *s.*, which sales were made either on credit, or were paid for in promissory notes, and will have to be brought to credit in future accounts.

The credit side of the account includes the two following payments:—

	£.	s.	d.
Donation to School for Children of In-pensioners - - -	100	-	-
Grant towards relief of Destitute Widows of In-pensioners - - -	20	-	-

These two payments do not appear to have been authorised in accordance with the requirements of the Greenwich Hospital Act. I annex copies of correspondence which has taken place with the Lords of the Admiralty respecting them.

(signed) *Wm. Dunbar*,
Comptroller General of the Receipt and Issue of Her Majesty's
Exchequer, and Auditor General of Public Accounts.

My Lord,

Exchequer and Audit Department,
17 June 1868.

I AM directed by the Comptroller and Auditor General to call your attention to the two following payments charged in the Account of the Income of Greenwich Hospital, for the year ended 31st March 1867, viz.:—

£. 100 paid under an Admiralty Order of 28th August 1866, as a donation to the schools for the children of in-pensioners, and directed by the above order to be paid out of the proceeds of the sale of grease.

£. 20 paid under an Admiralty Order of 16th January 1867, to the Captain Superintendent, as a donation to widows of pensioners.

As these payments do not appear to fall within the terms of the 28th Section of 28 & 29 Vict. c. 89, as "necessary and proper outgoings" in respect of the "management of the lands," and as the approval of Her Majesty in Council is required by section 30, for grants of money for "education of children or other public purposes," I am to request that the Comptroller and Auditor General may be informed whether an Order in Council has been obtained to authorise the above payments.

To Lord Henry Lennox, M.P., Admiralty.

I have, &c.
(signed) *C. L. Ryan*.

Sir,

Admiralty, 25 June 1868.

I AM commanded by my Lords Commissioners of the Admiralty to acknowledge the receipt of your Letter of the 17th instant, having reference to certain payments charged in the Account of the Income of Greenwich Hospital, for the year ended 31st March 1867.

In reply, I am to acquaint you that by "The Greenwich Hospital Act, 1865," Section 20, the government of Greenwich Hospital is vested in the Admiralty, and ordinary acts done by them in such government, do not require the approval of Her Majesty in Council.

The payment of 100 *l.* a year for the school of in-pensioners' children has for some years been an item in the General Expenditure of the Hospital, that of 20 *l.* for the relief of pensioners' widows at a time of extreme distress in the parish of Greenwich, was considered to be a donation properly made out of the Income of the Hospital as proprietors of a large portion of the parish.

Sections

Sections 28 and 30, referred to in your Letter, do not in their Lordships' opinion apply to items of expenditure of the above character, and under these circumstances, my Lords consider that they are legally entitled to charge both these items in the Income Account of Greenwich Hospital.

The Comptroller and Auditor General,
Exchequer and Audit Department.

I am, &c.
(signed) *Henry G. Lennox.*

My Lord,

Exchequer and Audit Department,
6 July 1868.

THE Comptroller and Auditor General having had under consideration your Lordship's letter of the 25th ultimo, respecting two sums of 100 £. and 20 £., respectively charged in the Account of the Income of Greenwich Hospital for the year ended 31st March 1867, I am directed to observe that, as stated by your Lordship, Section 20 of "The Greenwich Hospital Act, 1865," vests in the Admiralty "The government of Greenwich Hospital and of the Schools of the Hospital;" but that by Section 21 of the same Act, it is provided that "the expenses of the maintenance and government of Greenwich Hospital and of the Schools of the Hospital" (that is, expenses incurred under the previous Section), "shall be in the first instance defrayed out of money to be provided by Parliament."

As the payments above referred to have been charged to the Income of the Hospital, and not to the Vote, it would appear that they were not considered as expenditure incurred under Section 20 for the government of the Hospital.

With reference to the remark that the contribution (100 £.) towards the school for infirmity children has for some years been an item in the general expenditure of the Hospital, I am to observe that the charge in the Accounts of the late Commissioners of Greenwich Hospital for 1863, 1864, and 1865, was at the rate of 150 £. per annum; and the fact of an Admiralty Order being considered necessary, shows that it was not recognised as an ordinary duly authorised charge.

It appears to the Comptroller and Auditor General that the 30th Section of "The Greenwich Hospital Act, 1865," provides for grants (such as those in question) for charitable or public purposes; and that the two sums of 100 £. and 20 £. respectively, should have been submitted for the approval of Her Majesty in Council.

The Comptroller and Auditor General will accordingly have to notice the absence of such approval in his Report on the Account.

To Lord Henry Lennox, M.P., Admiralty.

I have, &c.
(signed) *C. L. Ryan.*

STATEMENT, prepared in the Exchequer and Audit Department, of the RECEIPT and EXPENDITURE

RECEIPTS:			CASH.	LOANS.	STOCK.	Shares in Hexham and Allendale Rail- way Company.
	£.	s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
To BALANCE on 1st April 1866 :						
For STOCK in the following Funds :						
£. 3 per Cent. Consols - - - - -	1,010,212	7 8				
£. 3 per Cent. Reduced - - - - -	1,520,761	- 8				
New £. 3 per Cent. - - - - -	105,682	10 4				
New £. 2½ per Cent. - - - - -	8,800	- -				
					2,645,455	18 8
For LOANS Granted by the late Commissioners of Greenwich Hospital, outstanding, viz. :						
Trustees of Greenwich and Woolwich Lower Roads (Balance) - - - - -	898	9 2				
Trustees of Alston Roads (Balance) - - -	25,348	15 3				
Commissioners for the Exhibition of 1851 (Balance) - - - - -	95,710	- -				
Loan on Mortgage of Hartburn Grainge Estate - - - - -	18,000	- -				
				139,957	4 5	
For CASH BALANCE on the 1st April 1866 - - - - -			1,483	1 9		
To CASH for STOCK Purchased as per contra - - - - -					18,631	13 6
To SHARES in Hexham and Allendale Railway Company - - - - -						10,000 - -
To PROCEEDS of SALE of Consolidated £. 3 per Cent. :						
Stock.						
25th June 1866 - - - - -	5,655	18 6	4,864	1 10		
13th March 1867 - - - - -	1,283	2 2	1,168	3 3		
				6,032	5 1	
To INSTALMENTS of LOANS Repaid, viz :						
Commissioners of the Exhibition of 1851 - - - - -	8,270	- -				
Trustees of Alston Roads - - - - -	100	- -				
				8,370	- -	
To TRANSFER from INCOME ACCOUNT on 1st March 1867, for In- vestment in £. 3 per Cent. Consolidated Annuities - - - - -			5,000	- -		
To RECEIPT from SALE of PROPERTY at Greenwich - - - - -			2,400	- -		
	£.		23,285	6 10	139,957	4 5
By BALANCE, being Excess of CASH PAYMENTS over RECEIPTS on the 31st March 1867 - - - - -			12,686	1 -		
	£.		35,971	7 10	139,957	4 5
					2,664,087	12 2
						10,000 - -

of CAPITAL held for the Benefit of GREENWICH HOSPITAL, in the Year ended 31st March 1867.

EXPENDITURE:			CASH.	LOANS.	STOCK.	Shares in Hexham and Allendale Rail- way Company.
			£. s. d.	£. s. d.	£. s. d.	£. s. d.
By PURCHASE of an ANNUITY for an Officer of the Hospital -	-	-	4,864 1 10			
By OUTLAY on NORTHERN ESTATES:		£. s. d.				
New Farm Buildings stipulated for on renewal of Lease - - - - -		1,456 4 9				
Additional Farm Buildings and Drainage Works (Tenants paying 5 per Cent. on the Outlay) - - - - -		2,629 16 3	4,086 1 -			
	STOCK.	CASH PAID.				
By PURCHASE of STOCK, viz:	£. s. d.	£. s. d.				
3rd May 1866 - - -	4,381 5 10	3,806 5 -				
29th May 1866 - - -	1,888 8 3	1,650 - -				
5th July 1866 - - -	3,953 18 -	3,430 - -				
31st July 1866 - - -	396 12 -	350 - -				
19th September 1866 - -	1,152 9 -	1,030 - -				
4th January 1867 - - -	110 6 10	100 - -				
8th February 1867 - - -	1,269 4 7	1,155 - -				
2nd March 1867 - - -	5,479 9 -	5,000 - -				
	£. 18,631 13 6		16,521 5 -			
By LOANS Repaid:						
Commissioners of Exhibition of 1851 - - -		8,270 - -				
Trustees of Alston Roads - - - - -		100 - -				
				8,370 - -		
By LOANS Written off:						
For difference between the Sum received, and the Amount of the Loan thereby paid off:						
55 per Cent. on the Loan to the Trustees of the Alston Roads - - - - -		- - -		122 4 5		
By STOCK Sold:						
On 25th June 1866 - - - - -		5,655 18 6				
On 13th March 1867 - - - - -		1,283 2 2			6,939 - 8	
By SHARES of Hexham and Allendale Railway Company pur- chased under the authority of the 2nd Section of the Act 29 Vict. c. 78 (Local) - - - - -			10,000 - -			
By PURCHASE of LAND at Randalholme - - - - -			500 - -			
	£.		35,971 7 10	8,492 4 5	6,939 - 8	
By BALANCE of SECURITIES on CAPITAL ACCOUNT - - - - -			- - -	131,465 - -	2,657,148 11 6	10,000 - -
	£.		35,971 7 10	139,957 4 5	2,664,087 12 2	10,000 - -

of the INCOME derived from the LAND and PROPERTY held for the Benefit of GREENWICH HOSPITAL,
31st March 1867.

EXPENDITURE.			CASH.	STOCK.
	£.	s. d.	£.	s. d.
By PAYMENTS on account of Property at Greenwich and Isle of Dogs, viz. :				
Ground Rent of Land in Isle of Dogs and Fee Farm Rents - - - - -	356	- 1		
Rates and Taxes on House Property in Greenwich, Commission on Petty Rents, &c. - - - - -	128	2 11		
Repairs to House Property at Greenwich - - - - -	108	6 1		
Fire Insurance on Property and Miscellaneous Disbursements - - - - -	48	6 9		
			640	15 10
NORTHERN ESTATES OF GREENWICH HOSPITAL.				
LANDS, COLLIERIES, QUARRIES, &c.				
By EXPENSES of Management, viz. :				
Salaries and Contingencies of the Receiver of the Northern Estates and Establishment - - - - -	2,039	8 4		
By OUTLAY for the Benefit of the Estates, viz. :				
New Fences, Stone Walls, Embankments, &c. - - - - -	1,173	5 6		
Repairs and Alterations of Farm Buildings, &c. - - - - -	1,137	11 3		
By DISBURSEMENTS under the following Heads, viz. :				
Law Charges - - - - -	40	1 4		
Land Tax, Fee Farm, and other Rent Charges - - - - -	53	8 4		
Retiring Allowances - - - - -	720	- -		
Tithe Rent Charges - - - - -	878	7 5		
Subscriptions to Schools and Charities, including Stipends - - - - -	395	6 -		
Improvement of Pasture Land, and Miscellaneous Charges on Lands, Collieries, &c. - - - - -	838	15 -		
WOODS.				
By WAGES of Woodkeepers, extra Men Planting, Felling Trees, Fencing, Draining Plantations, and Repairs; Nursery Goods; Taxes, Rates, and other Charges - - - - -	1,535	7 8		
MINES.				
By SALARIES of Moor Master and Clerk of Ore Deliveries, carriage of, and charges on sales of, Lead Ore, Repairs, &c. - - - - -	461	10 3		
			9,273	1 1
MISCELLANEOUS CHARGES.				
By EXPENSES in obtaining the Greenwich Hospital Act of 1865, and Power of Attorney on transfer of Stock - - - - -	428	14 -		
Provisions for Soup for Pensioners' Families - - - - -	8	3 3		
Costs in Court of Chancery in re Sirdefield Estate, and release of Covenant with Mr. Watson - - - - -	66	14 2		
Donation to School for Children of In-Pensioners - - - - -	100	- -		
Grant towards relief of Destitute Widows of In-Pensioners - - - - -	20	- -		
			623	11 5
By REPAYMENT to the Consolidated Fund of the United Kingdom of the amount certified by the Comptroller and Auditor General to have been expended in 1865-66, out of the money provided by Parliament on account of Greenwich Hospital, in accordance with the 51st Section of Act 28 & 29 Vict. c. 80 - - - - -	58,374	17 3		
Transfer to the Consolidated Fund of the United Kingdom of the proportionate part for the half-year ended 31st March 1866, at the rate of 15 <i>l.</i> per head per annum on the number of Men (1,010), by which the average number of In-mates of Greenwich Hospital during that half-year fell short of 1,400 Men, in accordance with the 51st Section of Act 28 & 29 Vict. c. 89 - - - - -	7,575	- -		
Total Amount paid to Consolidated Fund - - - - -	-	- -	65,949	17 3
Amount transferred to Capital Account for Investment in Consolidated £. 3 per Cent. Annuities, being the proportion of Annual Surplus Balance of Income directed by the Lords Commissioners of the Admiralty to be invested - - - - -	-	- -	5,000	- -
Provisional Investment of part of Surplus Floating Balance in the purchase of the following amounts of Consolidated £. 3 per Cent. Annuities :				
26th April 1866 - - - - -	£.	s. d.	70,000	- -
29th March 1867 - - - - -	-	- -	70,000	- -
	£. 157,061	16 8	140,000	- -
			221,487	5 7
BALANCE ON INCOME ACCOUNT - - - - -	-	- -	29,597	19 6
			£. 251,085	5 1
				157,061 16 8

GREENWICH HOSPITAL.

1866-67.

ACCOUNTS of the RECEIPT and EXPENDITURE
of the CAPITAL and of the INCOME derived
from the LANDS and PROPERTY held for the
Benefit of GREENWICH HOSPITAL.

(Presented in pursuance of Act 28 & 29 Vict. c. 89, ss. 47 and 49.)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

IRON-PLATED SHIPS AND BATTERIES.

RETURN to an Order of the Honourable The House of Commons,
dated 14 July 1868;—for,

A RETURN “of all IRON-PLATED SHIPS and BATTERIES Built, Building, or ordered to be Built
(in the same form and in continuation of Parliamentary Paper, No. 565, of Session 1867).”

Names.	By whom designed.	Name of Builder.	Number of Guns.	Ton- nage.	Load- displace- ment in Tons.	Horse power.	Name of Engine Maker.	If Engines on improved expansive plan, and surface condensers.	Draught of Water Estimated.		Length.		Breadth.		Hull, whether of Wood or Iron.
									For ward.	Aft.	Between perpendi- culars.	Of Keel for Ton- nage.	Ex- treme.	For Ton- nage.	

Whether wholly Armour- clad or partially.	Date when Launched, or probable Date of Launch- ing.	Estimated Date of Completion ready for Commis- sioning.	If Built on Captain Cole's Cupola Plan or Mr. Reed's Plan.	First Cost of Vessels now Complete, including Fittings.			Estimated First Cost of Vessels building in Her Majesty's Dockyards and in private yards.			Incidental and Establish- ment Charges (Hull and Engines).	Remarks.
				Hull, exclusive of Incidental and Estab- lishment Charges.	Engines, exclusive of Incidental and Estab- lishment Charges.	Total, exclusive of Incidental and Estab- lishment Charges.	Hull, exclusive of fittings.	Engines, exclusive of fittings.	Total.		

Admiralty,
24 July 1868. }

N. HOUGHTON,
Pro Chief Clerk.

(Mr. Laird.)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

RETURN OF ALL IRON-PLATED SHIPS AND BATTERIES

NAMES.	By whom Designed.	Name of Builder.	Number of Guns.	Tonnage.	Load Dis- placement in Tons.	Horse Power.	Name of Engine Maker.	If Engines on Improved Expansive Plan, and Surface Condensers.	Draught of Water.		Length		Breadth,		
									Forward.	Aft.	Between Per- pendiculars.	Of Keel for Tonnage.	Extreme.	For Tonnage.	
AFLOAT:															
Black Prince -	Controller's De- partment.	Napier & Sons - - - -	28	6,109	9,250	1,250	Penn -	No - -	26 3	27 3	380 2	337 7½	58 4	58 4	
Warrior - -	- ditto - -	Thames Iron Shipbuilding Company	32	6,109	9,020	1,250	Penn -	No - -	25 10	26 9	380 2	337 7½	58 4	58 4	
Defence - -	- ditto - -	Palmer Brothers - - - -	16	3,720	6,000	600	Penn -	No - -	24 4	25 6	280 0	238 5½	54 2	54 2	
Resistance - -	- ditto - -	Westwood, Baillie & Co. - - -	16	3,710	5,979	600	Penn -	No - -	23 6½	26 2	280 0	238 6½	54 1	54 1	
Achilles - -	- ditto - -	Mr. Lang, Master Shipwright, H.M.'s Dockyard, Chatham.	26	6,121	9,525	1,250	Penn -	No - -	25 10	27 2	380 0	338 9	58 3½	58 3½	
Hector - -	- ditto - -	Napier & Sons - - - -	18	4,089	6,409	800	Napier -	No - -	24 0	25 7	280 2	241 6½	56 5	56 5	
Valiant - -	- ditto - -	Commenced by Westwood, Baillie & Co., completed by Thames Iron Shipbuilding Company.	18	4,063	6,364	800	Maudslay -	No - -	(a) 24 2	(a) 25 2	280 2	241 6¼	56 4	56 4	
Minotaur - -	- ditto - -	Thames Iron Shipbuilding Com- pany.	26	6,621	10,230	1,350	Penn -	No - -	25 7	26 9	400 0	354 0½	59 4½	59 4½	
Agincourt - -	- ditto - -	Laird Brothers - - - -	28	6,621	10,230	1,350	Maudslay -	No - -	(a) 25 10	(a) 26 10	400 0	353 6	59 5	59 5	
Northumberland -	- ditto - -	Mare & Co. and Millwall Ship- building Company.	28	6,621	10,230	1,350	Penn -	No - -	(a) 25 10	(a) 26 10	400 4	353 0	59 5	59 5	
Royal Oak - -	- ditto - -	Mr. Lang, Master Shipwright, H.M.'s Dockyard, Chatham.	24	4,056	6,400	800	Maudslay -	No - -	23 10	25 5	273 0	232 8½	58 6	57 3	
Prince Consort -	- ditto - -	Mr. Fincham, Master Shipwright, H.M.'s Dockyard, Pembroke.	24	4,045	6,600	1,000	Maudslay -	No - -	23 6	26 9	273 1	232 8¾	58 5	57 2	
Caledonia - -	- ditto - -	Mr. Turner, Master Shipwright, H.M.'s Dockyard, Woolwich.	24	4,125	6,767	1,000	Maudslay -	No - -	24 3	26 8	273 0	231 3¼	59 2	57 11	
Ocean - -	- ditto - -	Mr. Peake, Master Shipwright, H.M.'s Dockyard, Devonport.	24	4,047	6,600	1,000	Maudslay -	No - -	24 2	27 3	273 1	232 9½	58 5	57 2	
Royal Alfred - -	- ditto - -	Mr. Cradock, Master Shipwright, H.M.'s Dockyard, Portsmouth.	18	4,068	6,502	800	Maudslay -	No - -	23 6	27 0	273 0	232 8½	58 7	57 4	
Zealous - -	Controller's De- partment and Mr. Reed.	Mr. Fincham, Master Shipwright, H.M.'s Dockyard, Pembroke.	20	3,716	6,027	800	Maudslay -	No - -	25 0	25 9	252 0	213 9¼	58 7	57 2	
Repulse - -	Controller's De- partment.	Mr. Ladd, Master Shipwright, H.M.'s Dockyard, Woolwich.	12	(f) 3,749	(a) 6,190	800	Penn -	No - -	(a) 25 0	(a) 26 6	252 0	214 9¼	59 1½	57 3½	
Bellerophon -	Controller's De- partment and Mr. Reed.	Mr. Thornton, Master Shipwright, H.M.'s Dockyard, Chatham.	15	4,270	(g) 7,450	1,000	Penn -	Yes - -	(g) 22 7	(g) 26 5	300 0	255 3¼	56 1	56 1	
Hercules - -	Controller's De- partment.	Mr. Thornton, Master Shipwright, H.M.'s Dockyard, Chatham.	14	(f) 5,234	(a) 8,530	1,200	Penn -	Yes - -	(a) 22 6	(a) 26 6	325 0	282 3¼	59 0½	59 0½	
Lord Clyde - -	Controller's De- partment and Mr. Reed.	Mr. Fincham, Master Shipwright, H.M.'s Dockyard, Pembroke.	24	4,067	7,626	1,000	Ravenhill -	Yes - -	23 5	26 10	280 0	233 11¾	58 11	57 2	
Lord Warden -	- ditto - -	Mr. Thornton, Master Shipwright, H.M.'s Dockyard, Chatham.	18	4,080	(g) 7,839	1,000	Maudslay -	Yes - -	(g) 23 7	(g) 27 9	280 0	233 9¼	59 0½	57 3½	
Penelope - -	Controller's De- partment.	Mr. Fincham, Master Shipwright, H.M.'s Dockyard, Pembroke.	11	3,096	(g) 4,384	600	Maudslay -	Yes - -	(g) 15 9	(g) 17 4	266 0	232 9½	50 0	50 0	
Pallas - -	Controller's De- partment and Mr. Reed.	Mr. Turner, Master Shipwright, H.M.'s Dockyard, Woolwich.	8	2,372	3,656	600	Humphreys	Yes - -	18 7	24 1½	225 0	187 8	50 0	48 9	
Favorite - -	- ditto - -	Mr. Ladd, Master Shipwright, H.M.'s Dockyard, Deptford.	10	2,094	3,169	400	Humphreys	No - -	19 7	22 7	225 0	195 6¼	46 9½	44 10½	

(a) This is the estimated load displacement and draught of water.

(e) The variation from the amount shewn last year arises from the rectification and completion of the accounts.

(f) The variation from the tonnage shewn last year arises from the measured tonnage being given instead of the calculated tonnage from the drawing.

(g) The variation from the draught of water and displacement shewn last year arises from the actual measurements being given instead of the calculated measurements from the drawings.

(j) In the case of these converted ships, the cost given includes the whole amount expended prior to conversion.

(k) The amounts here shewn are for converting the hull and fitting engines removed from the "Prince of Wales," and do not include the expense on hull prior to conversion, or the value of the engines.

BUILT, BUILDING, OR ORDERED TO BE BUILT.

Hull, whether of Wood or Iron.	Whether wholly Armour-clad or Partially.	Date when Launched, or probable Date of Launching.	Estimated Date of Completion ready for Commissioning.	If Built on Captain Coles' Turret Plan or Mr. Reed's Plan.	First Cost of Vessels now Complete, including Fittings.			Estimated First Cost of Vessels Building in Her Majesty's Dockyards, and in Private Yards.			Incidental and Establishment Charges (Hull and Engines).	N A M E S.
					Hull, exclusive of Incidental and Establishment Charges.	Engines, &c., exclusive of Incidental and Establishment Charges.	Total, exclusive of Incidental and Establishment Charges.	Hull, including Fittings.	Engines, including Fittings.	TOTAL.		
Iron	Partially	27 Feb. 1861	Commissioned	No	£.	£.	£.	£.	£.	£.		AFLOAT:
Iron	Partially	29 Dec. 1860	Commissioned	No	283,511	74,482	357,993	-	-	Building completed	-	Black Prince.
Iron	Partially	24 April 1861	Commissioned	No	282,581	74,409	356,990	-	-	Building completed	-	Warrior.
Iron	Partially	11 April „	Commissioned	No	203,229	34,357	237,586	-	-	Building completed	-	Defence.
Iron	Partially	23 Dec. 1863	Commissioned	No	208,571	33,765	242,336	-	-	Building completed	-	Resistance.
Iron	Partially	26 Sept. 1862	Commissioned	No	375,473	69,117	444,590	-	-	Building completed	-	Achilles.
Iron	Partially	14 Oct. 1863	Commissioned	No	237,911	45,738	283,649	-	-	Building completed	-	Hector.
Iron	Partially	12 Dec. 1863	Commissioned	No	(e) (m) (n) 264,454	(n) 48,323	(e) (m) (n) 312,777	-	-	Building completed	-	Valiant.
Iron	Wholly	27 Mar. 1865	Ready, except small fittings.	No	(e) (m) (n) 373,238	(e) (m) (n) 79,589	(e) (m) (n) 452,827	-	-	Building completed	-	Minotaur.
Iron	Wholly	17 April 1866	Commissioned	No	(e) (m) (n) 362,836	(e) (m) (n) 83,279	(e) (m) (n) 446,115	Building by contractors completed; being fitted at Devonport.			-	Agincourt.
Wood	Wholly	10 Sept. 1862	Commissioned	No	(e) (n) 379,589	(e) (n) 79,520	(e) (n) 459,109	Building by contractors completed; being fitted at Devonport.			-	Northumberland
Wood	Wholly	26 June „	Commissioned	No	(j) (o) 189,381	(j) 45,310	(j) (o) 234,691	-	-	Building completed	-	Royal Oak.
Wood	Wholly	24 Oct. „	Commissioned	No	(j) (o) 174,392	(j) 52,603	(j) (o) 226,995	-	-	Building completed	-	Prince Consort.
Wood	Wholly	19 Mar. 1863	Commissioned	No	(j) (o) 212,763	(j) 51,895	(j) (o) 264,658	-	-	Building completed	-	Caledonia.
Wood	Wholly	15 Oct. 1864	Commissioned	No	(j) (o) 201,651	(j) 52,162	(j) (o) 253,813	-	-	Building completed	-	Ocean.
Wood	Partially	7 Mar. „	Commissioned	Mr. Reed's	(e) (j) (o) 221,856	(e) (j) 47,514	(e) (j) (o) 269,370	-	-	Building completed	-	Royal Alfred.
Wood	Partially	25 April 1868	31 July 1869	Mr. Reed's	(j) 170,292	(e) (j) 53,169	(e) (j) 223,461	-	-	Building completed	-	Zealous.
Wood	Partially	26 April 1865	Commissioned	Mr. Reed's	(k) 178,862	(k) 5,226	(k) 184,088	-	-	Building completed	-	Repulse.
Iron	Partially	10 Feb. 1868	20 Sept. 1868	Mr. Reed's	(e) 256,114	(e) 86,962	(e) 343,076	-	-	Building completed	-	Bellerophon.
Wood	Wholly	13 Oct. 1864	Commissioned	Mr. Reed's	-	-	-	320,000	81,000	401,000	-	Hercules.
Wood	Wholly	27 May 1865	Commissioned	Mr. Reed's	(e) 212,167	(e) 61,657	(e) 273,824	-	-	Building completed	-	Lord Clyde.
Iron	Partially	18 June 1867	Commissioned	Mr. Reed's	(e) (p) 248,304	(e) 68,533	(e) (p) 316,837	-	-	Building completed	-	Lord Warden.
Wood	Partially	14 Mar. 1865	Commissioned	Mr. Reed's	-	-	-	150,000	38,400	188,400	-	Penelope.
Wood	Wholly	5 July 1864	Commissioned	Mr. Reed's	(e) 143,769	(e) 39,807	(e) 183,576	-	-	Building completed	-	Pallas.
Wood	Wholly				(j) 122,423	(j) 24,016	(j) 146,439	-	-	Building completed	-	Favorite.

As the Incidental and Establishment Charges prior to 1866-67 have each year been calculated on a different basis, it would be useless to insert them as so calculated in this Return; and the Report of the Parliamentary Committee on Admiralty Monies and Accounts was not received in sufficient time to admit of their being re-calculated for this Return, in accordance with the recommendations of that Committee.

(m) Claims for extra payments made by the contractors not yet settled.
 (n) Accounts given up to 31 March 1868.
 (o) The first cost of the "Prince Consort" was less than that of her sister ships, partly because the fittings and alterations which experience at sea shewed to be desirable in this ship, were carried out in other ships before they proceeded to sea, and so increased the first cost. The first cost of the "Caledonia" has been also increased by the addition of a poop and fore-castle, by a change of armament and rig, by cutting scuttles through the armour plates, by fitting the ship for

a flag officer, and by various other changes connected with the comfort of the crew and the ventilation of the ship. The first cost of the "Ocean" has been increased by alterations in her armament, cutting scuttles through the armour-plating, &c. The first cost of the "Royal Alfred" has been increased by a total change of armament, armour-plating, and fitting as a flag-ship.

(p) The first cost of the "Lord Warden" has been increased by a total change of armament and various fittings.

RETURN OF ALL IRON-PLATED SHIPS AND BATTERIES

NAMES.	By whom Designed.	Name of Builder.	Number of Guns.	Tonnage.	Load Dis- placement in Tons.	Horse Power.	Name of Engine Maker.	If Engines on Improved Expansive Plan and Surface Condensers.	Draught of Water.		Length		Breadth,		
									Forward.	Aft.	Between Per- pendiculars.	Of Keel for Tonnage.	Extreme.	For Tonnage.	
AFLOAT—continued.															
Research - -	Controller's De- partment and Mr. Reed.	Mr. Fincham, Master Shipwright, H.M.'s Dockyard, Pembroke.	4	1,253	1,741	200	Watt -	Surface con- densers and superheaters, but do not work expan- sively.	12 3	15 3	195 0	168 3 $\frac{1}{8}$	38 6	37 5	
Enterprise - -	- ditto - -	Mr. Ladd, Master Shipwright, H.M.'s Dockyard, Deptford.	4	993	1,350	160	Ravenhill -	- ditto -	12 4	15 10	180 0	152 11 $\frac{1}{2}$	36 0 $\frac{1}{2}$	34 11 $\frac{1}{2}$	
Waterwitch -	Rear Admiral Elliot.	Thames Iron Shipbuilding Com- pany.	2	778	1,147	160	Dudgeon -	No - -	11 1 $\frac{1}{2}$	11 7	162 0	142 9	32 1	32 1	
Vixen - -	Controller's De- partment.	Mr. C. Lungley - - -	2	754	1,197	160	Maudslay -	No - -	10 5	11 5 $\frac{1}{2}$	160 0	134 10 $\frac{1}{4}$	32 5	32 5	
Viper - -	- ditto - -	J. & W. Dudgeon - - -	2	737	1,072	160	Maudslay -	No - -	10 3	11 9	160 0	135 4 $\frac{3}{8}$	32 0	32 0	
Monarch - -	- ditto - -	Mr. Thornton, Master Shipwright, H.M.'s Dockyard, Chatham.	7	(f) 5,102	(a) 8,164	1,100	Humphreys	Yes - -	(a) 22 6	(a) 26 0	330 0	289 10 $\frac{7}{8}$	57 6 $\frac{1}{4}$	57 6 $\frac{1}{4}$	
Royal Sovereign -	Controller's De- partment; altered for turret-ship by Controller's De- partment and Captain Coles.	Mr. Cradock, Master Shipwright, H.M.'s Dockyard, Portsmouth.	5	3,765	5,080	800	Maudslay -	No - -	21 6	24 11	240 7	201 11 $\frac{1}{8}$	62 2	59 2 $\frac{1}{2}$	
Prince Albert -	Controller's De- partment and Captain Coles.	Samuda Brothers - - -	4	2,529	3,809	500	Humphreys	No - -	18 4	20 0	240 0	206 4	48 1	48 1	
Scorpion - -	Laird Brothers -	Laird Brothers - - -	4	1,833	2,660	350	Laird Bros.	No - -	14 11	16 4	224 6	191 7 $\frac{7}{8}$	42 4 $\frac{1}{2}$	42 4 $\frac{1}{2}$	
Wivern - -	- ditto - -	Laird Brothers - - -	4	1,899	2,625	350	Laird Bros.	No - -	14 8	16 3	224 6	199 1 $\frac{7}{8}$	42 4	42 4	
BUILDING :															
Sultan - -	Controller's De- partment.	Mr. Thornton, Master Shipwright, H.M.'s Dockyard, Chatham.	13	5,226	(a) 8,817	1,200	Engines not ordered	-	(a) 23 0	(a) 27 0	325 0	282 2 $\frac{7}{8}$	59 0	59 0	
Captain - -	Messrs. Laird and Captain Coles.	Laird Brothers - - -	6	4,272	(a) 6,866	900	Laird -	Yes -	(a) 22 6	(a) 23 6	320 0	283 4	53 3	53 3	
Glatton - -	Controller's De- partment.	Mr. Thornton, Master Shipwright, H.M.'s Dockyard, Chatham.	2	2,709	{(b) 4,860 (c) 5,184}	500	Engines not ordered	-	{(b) 19 0 (c) 20 0}	{(b) 19 0 (c) 20 0}	245 0	212 1 $\frac{3}{8}$	54 0	49 0	
Swiftsure - -	- ditto - -	Contract not made - - -	14	3,893	(a) 6,522	800	Engines not ordered	-	(a) 24 0	(a) 25 6	280 0	241 11	55 0	55 0	
Triumph - -	- ditto - -	Contract not made - - -	14	3,893	(a) 6,522	800	Engines not ordered	-	(a) 24 0	(a) 25 6	280 0	241 11	55 0	55 0	
Iron Duke - -	- ditto - -	Mr. Fincham, Master Shipwright, H.M.'s Dockyard, Pembroke.	14	3,774	(a) 5,895	800	Engines not ordered	-	(a) 21 6	(a) 22 6	280 0	243 4	54 0	54 0	
Audacious - -	- ditto - -	Napier & Sons - - -	14	3,774	(a) 5,895	800	Ravenhill -	Yes -	(a) 21 6	(a) 22 6	280 0	243 4	54 0	54 0	
Invincible - -	- ditto - -	Napier & Sons - - -	14	3,774	(a) 5,895	800	Napier -	Yes -	(a) 21 6	(a) 22 6	280 0	243 4	54 0	54 0	
Vanguard - -	- ditto - -	Laird Brothers - - -	14	3,774	(a) 5,895	800	Laird -	Yes -	(a) 21 6	(a) 22 6	280 0	243 4	54 0	54 0	
Hotspur - -	- ditto - -	Contract not made - - -	2	2,637	(a) 4,331	600	Engines not ordered	-	(a) 20 0	(a) 22 0	235 0	198 3 $\frac{3}{4}$	50 0	50 0	
FLOATING BATTERIES :															
Erebus - -	Controller's De- partment.	Napier & Sons - - -	16	1,954	1,825	200	Napier -	No - -	8 9	8 9	186 8 $\frac{1}{2}$	156 2	48 6	48 6	
Terror - -	- ditto - -	Palmer Brothers - - -	16	1,971	1,844	200	Napier -	No - -	8 9	8 11	186 3	157 1 $\frac{1}{4}$	48 8	48 6 $\frac{3}{4}$	
Thunderbolt -	- ditto - -	Samuda Brothers - - -	16	1,973	1,825	200	Ravenhill -	No - -	8 9	8 9	186 11	157 10	48 5 $\frac{3}{4}$	48 5 $\frac{3}{4}$	
Thunder - -	- ditto - -	Mare & Co. - - -	14	1,469	1,672	150	Ravenhill -	No - -	8 7	9 3	172 6	146 0	43 11	43 5	

(a) This is the estimated load displacement and draught of water.

(b) Estimated load displacement and draught of water for ordinary purposes.

(c) Estimated load displacement and draught of water for fighting purposes.

(d) This is the contract price and includes masts and yards, &c. and fitting the ship for sea, except providing rigging, armament, and stores.

(e) The variation from the amount shewn last year arises from the rectification and completion of the accounts.

BUILT, BUILDING, OR ORDERED TO BE BUILT—continued.

Hull, whether of Wood or Iron.	Whether wholly Armour-clad or Partially.	Date when Launched, or probable Date of Launching.	Estimated Date of Completion ready for Commissioning.	If Built on Captain Coles' Turret Plan, or Mr. Reed's Plan.	First Cost of Vessels now Complete, including Fittings.			Estimated Hull, including Fittings.	First Cost of Vessels Building in His Majesty's Dockyards and in Private Yards.			Incidental and Establishment Charges (Hull and Engines).	NAMES.
					Hull, exclusive of Incidental and Establishment Charges.	Engines, &c. exclusive of Incidental and Establishment Charges.	Total, exclusive of Incidental and Establishment Charges.		Hull, including Fittings.	Engines, including Fittings.	TOTAL.		
Wood	Partially	15 Aug. 1863	Commissioned	Mr. Reed's	£. (j) 56,734	£. (e) (j) 10,150	£. (e) (j) 66,884	£. -	£. -	Building completed	£. -	As the Incidental and Establishment Charges prior to 1866-67 have each year been calculated on a different basis, it would be useless to insert them as so calculated in this Return; and the Report of the Parliamentary Committee on Admiralty Monies and Accounts was not received in sufficient time to admit of their being re-calculated for this Return, in accordance with the recommendations of that Committee.	Afloat—cont ^d . Research.
Wood	Partially	9 Feb. 1864	Commissioned	Mr. Reed's	(j) 51,762	(j) 8,676	(j) 60,438	-	-	Building completed	-		Enterprisc.
Iron	Partially	28 June 1866	Commissioned	No	(e) 44,151	(e) 14,323	(e) 58,474	-	-	Building completed	-		Waterwitch.
Wood and iron.	Partially	18 Nov. 1865	Commissioned	Mr. Reed's	(e) 46,334	(e) 7,860	(e) 54,194	-	-	Building completed	-		Vixen.
Iron	Partially	21 Dec. "	Commissioned	Mr. Reed's	(e) 43,517	(e) 7,610	(e) 51,127	-	-	Building completed	-		Viper.
Iron	Partially	25 May 1868	Jan. 1869	Captain Coles'	-	Not completed	-	300,000	66,000	366,000	-		Monarch.
Wood	Wholly	8 Mar. 1864 Undocked after conversion.	Commissioned	Captain Coles'	(l) 125,663	(l) 1,724	(l) 127,387	-	-	Conversion completed	-		Royal Sovereign.
Iron	Wholly	23 May 1864	Commissioned	Captain Coles'	(e) 177,484	24,129	(e) 201,613	-	-	Building completed	-		Prince Albert.
Iron	Wholly	4 July 1863	Commissioned	Captain Coles'	{ The hull and engines were purchased to- gether for one sum }		(e) (q) 110,579	-	This vessel was purchased	-	-		Scorpion.
Iron	Wholly	29 Aug. "	Commissioned	Captain Coles'	{ ditto }		(e) (q) 115,845	-	-	ditto	-		Wivern.
Iron	Partially	Feb. 1870	Aug. 1870	Mr. Reed's	-	-	-	320,000	-	Engines not ordered	-	BUILDING: Sultan.	
Iron	Partially	Jan. 1869 For undocking.	March 1869	Captain Coles'	-	-	-	(d) 276,500	58,500	(d) 335,000	-	Captain.	
Iron	Wholly	Oct. 1869	March 1870	Captain Coles'	-	-	-	(r) 145,000	-	Engines not ordered	-	Glatton.	
Iron sheathed with wood.	Partially	20 Aug. 1870	Dec. 1870	Mr. Reed's	-	-	-	-	-	Contract not made	-	Swiftsure.	
Iron sheathed with wood.	Partially	20 Nov. 1870	March 1871	Mr. Reed's	-	-	-	-	-	Contract not made	-	Triumph.	
Iron	Partially	April 1870	Oct. 1870	Mr. Reed's	-	-	-	196,000	-	Engines not ordered	-	Iron Duke.	
Iron	Partially	Dec. 1868	July 1869	Mr. Reed's	-	-	-	(d) 170,357	52,300	222,657	-	Audacious.	
Iron	Partially	Mar. 1869	Oct. "	Mr. Reed's	-	-	-	(d) 170,357	51,400	221,757	-	Invincible.	
Iron	Partially	Building in Dock.	Oct. "	Mr. Reed's	-	-	-	(d) 196,259	53,500	249,759	-	Vanguard.	
Iron	Partially	Uncertain	Uncertain	Mr. Reed's	-	-	-	-	-	Contract not made	-	Hotspur.	
Iron	Wholly	19 April 1856	-	No	{ 70,539 Not completed for sea }	11,500	82,039	-	-	Building by contractors completed	-	FLOATING BATTERIES. Erebus.	
Iron	Wholly	26 April "	Commissioned	No	69,226	11,500	80,726	-	-	Building completed	-	Terror.	
Iron	Wholly	22 April "	-	No	{ 68,630 Not completed for sea }	11,600	80,230	-	-	Building by contractors completed	-	Thunderbolt.	
Wood	Wholly	17 April 1855	-	No	49,433	10,343	59,776	-	-	Building completed	-	Thunder.	

(f) The variation from the tonnage shewn last year arises from the measured tonnage being given instead of the calculated tonnage from the drawing.

(j) In the case of these converted ships, the cost given includes the whole amount expended prior to conversion.

(l) The amounts here shewn are for the conversion of the ship, and do not include her original cost as a line-of-battle ship.

(q) The excess in the cost of the "Wivern" over that of the "Scorpion" arises from the alterations made in the former at Captain Coles' suggestion.

(r) This is a rough estimate.

IRON-PLATED SHIPS AND BATTERIES

RETURN of all IRON-PLATED SHIPS and
BATTERIES Built, Building, or ordered to be
Built (in continuation of Parliamentary Paper,
No. 565, of Session 1867).

(*Mr. Laird.*)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

473.

Under 1 oz.

NAVAL RESERVE.

RETURN to an Order of the Honourable The House of Commons,
dated 12 March 1867 ;—*for*,

RETURN “ of the whole Number of MEN now Enrolled in the ROYAL
NAVAL RESERVE; distinguishing the Ports, &c. at which they are
Enrolled, and of the whole Number Drilled during the Year 1867 (in
continuation of Parliamentary Paper, No. 386, of Session 1867).”

Board of Trade, }
17 April 1868. }

T. H. FARRER.

(*Admiral Erskine.*)

Ordered, by The House of Commons, to be Printed,
23 April 1868.

RETURN of the whole Number of MEN now Enrolled in the ROYAL NAVAL RESERVE; distinguishing the Ports, &c. at which they are Enrolled, and of the whole Number Drilled during the Year 1867.

(A.)—NUMBER ENROLLED to 31st December 1867.

NAME OF PORT.	Number Enrolled.	NAME OF PORT.	Number Enrolled.
Aberdeen - - - - -	615	Lerwick - - - - -	278
Aberystwith - - - - -	8	Limerick - - - - -	22
Alloa - - - - -	23	Liverpool - - - - -	1,161
Arbroath - - - - -	71	Llanelly - - - - -	39
Ardrossan - - - - -	69	London - - - - -	2,733
Arundel - - - - -	7	Lowestoft - - - - -	24
Ayr - - - - -	10	Lyne - - - - -	20
Banff - - - - -	26	Lynn - - - - -	113
Barnstaple - - - - -	24	Maldon - - - - -	9
Beaumaris - - - - -	56	Maryport - - - - -	116
Belfast - - - - -	46	Middlesborough - - - - -	10
Berwick - - - - -	47	Milford - - - - -	25
Bideford - - - - -	32	Montrose - - - - -	69
Blyth - - - - -	61	Newcastle - - - - -	166
Borrowstoness - - - - -	15	Newhaven - - - - -	33
Boston - - - - -	2	Newport - - - - -	2
Bridgewater - - - - -	187	Newry - - - - -	5
Bridport - - - - -	39	Padstow - - - - -	30
Bristol - - - - -	634	Penzance - - - - -	89
Carnarvon - - - - -	153	Perth - - - - -	14
Cardiff - - - - -	114	Peterhead - - - - -	240
Cardigan - - - - -	73	Plymouth - - - - -	333
Carlisle - - - - -	4	Poole - - - - -	165
Chepstow - - - - -	1	Portsmouth - - - - -	107
Colchester - - - - -	12	Preston - - - - -	7
Cork - - - - -	142	Ramsay - - - - -	4
Cowes - - - - -	5	Ramsgate - - - - -	24
Dartmouth - - - - -	238	Rochester - - - - -	20
Deal - - - - -	2	Runcorn - - - - -	9
Dover - - - - -	2	Rye - - - - -	20
Douglas - - - - -	50	Scarborough - - - - -	44
Dublin - - - - -	101	Seaham - - - - -	321
Dumfries - - - - -	6	Shields, North - - - - -	840
Dundalk - - - - -	13	Shields, South - - - - -	312
Dundee - - - - -	784	Shoreham - - - - -	16
Exeter - - - - -	165	Sligo - - - - -	2
Falmouth - - - - -	109	Southampton - - - - -	377
Faversham - - - - -	31	Stornoway - - - - -	1
Fleetwood - - - - -	27	Strangford - - - - -	1
Folkestone - - - - -	1	Stranraer - - - - -	5
Fowey - - - - -	162	Sunderland - - - - -	1,032
Galway - - - - -	34	Swansea - - - - -	159
Glasgow - - - - -	319	Teignmouth - - - - -	26
Gloucester - - - - -	1	Tralee - - - - -	1
Grangemouth - - - - -	11	Troon - - - - -	3
Granton - - - - -	7	Waterford - - - - -	41
Greenock - - - - -	156	Wells - - - - -	16
Grimsby - - - - -	23	Wexford - - - - -	81
Guernsey - - - - -	8	Weymouth - - - - -	39
Harwich - - - - -	14	Whitby - - - - -	27
Hartlepool - - - - -	478	Whitehaven - - - - -	158
Hayle - - - - -	1	Wick - - - - -	1
Hull - - - - -	127	Wigtown - - - - -	1
Inverness - - - - -	61	Wisbeach - - - - -	3
Ipswich - - - - -	13	Woodbridge - - - - -	4
Jersey - - - - -	9	Workington - - - - -	19
Kirkcaldy - - - - -	3	Yarmouth - - - - -	111
Kirkwall - - - - -	3	Youghal - - - - -	53
Leith - - - - -	70		

Actual Strength on 31st December 1867, corrected by returns received to this date

15,091

(B.)--NUMBER who presented themselves for DRILL during the Year 1867.

Drilled for 28 days - - - - -	7,272
Drilled for more than 28 days, being drill required for the current year, and arrears during the year 1866, when absent on a long voyage - - - - -	2,970
Drilled for less than 28 days in consequence of being—	
Discharged, dismissed, having died, or entered Royal Navy - - -	1,285
Absent on voyages - - - - -	675
Enrolled during the 2nd, 3rd, or 4th quarters, and not required to perform 28 days' drill - - - - -	286
Unable to complete drill through sickness - - - - -	2
From unknown causes, have only performed 7, 14, or 21 days' drill - - -	400
Number who presented themselves for drill in the year - - - -	12,890
Number who have taken no drill during the year in consequence of—	
1. Authorised absence - - - - -	929
2. Unknown causes - - - - -	674
3. Discharged abroad, deserted, &c. - - - - -	598
	2,201
TOTAL Strength of the RESERVE on 31st December 1867 -	15,091

General Register and Record Office of Seamen,
6, Adelaide-place, London Bridge,
8 April 1868.

J. Mayo,
Registrar General.

NAVAL RESERVE.

RETURN of the whole Number of MEN now Enrolled in the ROYAL NAVAL RESERVE; distinguishing the Ports, &c. at which they are Enrolled, and of the whole Number Drilled during the Year 1867. (in continuation of Parliamentary Paper, No. 386, of Session 1867).

(*Admiral Erskine.*)

*Ordered, by The House of Commons, to be Printed,
23 April 1868.*

NAVAL RESERVE.

RETURN to an Order of the Honourable The House of Commons,
dated 13 March 1868;—for,

RETURN “relative to the SEAMEN of the ROYAL NAVAL RESERVE, in the
following Form :—

	1865-6.	1866-7.	1867-8.	1868-9.
Number of Men on previous 1st of January.				
Provision in Estimates for Annual Retainer, Drill Pay, and Lodging Allowance.				
Expenditure on account of ditto -				
Excess of provision - - -				

Admiralty, }
27 April 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

RETURN showing the Number of SEAMEN of the ROYAL NAVAL RESERVE, and of
the EXPENDITURE incurred on their account for Annual Retainers, Drill Pay, and
Lodging Money for the Years 1865-6, 1866-7, 1867-8, 1868-9.

	1865-6.	1866-7.	1867-8.	1868-9.
*Number of Men on previous 1st of January.	16,651	17,264	16,362	14,923
Provision in Estimates for Annual Retainer, Drill Pay, and Lodging Allowance.	133,333	133,333	133,333	133,333
	£. s. d.	£. s. d.		
Expenditure on account of ditto -	111,920 13 10	116,531 15 -	The expenditure for the year 1867-8 cannot be given, as the accounts to the 31st March 1868 have not yet been received at the Admiralty.	
Excess of provision - - -	21,412 6 2	16,801 5 -		

* The above numbers represent the actual strength of the Reserve on the 2nd January 1865, and 1st January 1866, 1867, and 1868. The present strength of the Reserve is 15,358.

Admiralty, }
2nd April 1868. }

J. Beeby,
Accountant General of the Navy.

NAVAL RESERVE.

RETURN showing the Number of SEAMEN of the
ROYAL NAVAL RESERVE, and of the EXPEN-
DITURE incurred on their account for Annual
Retainers, Drill Pay, and Lodging Money for
the Years 1865-6, 1866-7, 1867-8, and 1868-9.

(*Mr. Shaw Lefevre.*)

*Ordered, by The House of Commons, to be Printed,
28 April 1868.*

NAVAL RESERVE.

RETURN to an Order of the Honourable The House of Commons,
dated 30 April 1868;—for,

COPIES, “of the REPORT, by Captain *Gardner*, of his Inspection of the ROYAL NAVAL RESERVE during February and March 1868:”

“And, of the REPORT of Rear Admiral *Tarleton* to the Admiralty on the RETURNS and REPORTS from DRILL SHIPS of NAVAL RESERVE MEN Drilled during the Year 1867.”

Admiralty, }
18 May 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

REPORT of Captain *Gardner's* Inspection of DRILL SHIPS and some of DRILL STATIONS in the North of *England* and *Scotland*, in February and March 1868.

To the Commodore Controller-General of the Coast Guard.

Coast Guard Office, Admiralty,
16 March 1868.

THE following is the Report of my proceedings during a tour of inspection of the drill ships and a few of the drill batteries of the Royal Naval Reserve in the north.

In compliance with my instructions, I left London on the 13th February, and visited the following ships and stations in rotation :—

“Dædalus”	-	-	-	-	-	Bristol.
“Eagle”	-	-	-	-	-	Liverpool.
“Winchester”	-	-	-	-	-	Aberdeen.
Drill Battery	-	-	-	-	-	Peterhead.
“Brilliant”	-	-	-	-	-	Dundee.
Drill Battery	-	-	-	-	-	Berwick-on-Tweed.
“Castor”	-	-	-	-	-	North Shields.
Drill Battery	-	-	-	-	-	Blyth Haven.
“Durham”	-	-	-	-	-	Sunderland.
Drill Battery	-	-	-	-	-	Seaham.
“Trincomalee”	-	-	-	-	-	West Hartlepool.
“President”	-	-	-	-	-	West India Docks, Poplar, London.

The entire number of men inspected on drill was 758 men; of which number about 45 I had seen before. The weather, in several instances, was very stormy and wet, and prevented target practice; but where it was available I had the men out for the purpose.

“DÆDALUS,” DRILL SHIP AT BRISTOL.

Seventy-four men on drill; a fine body of seamen, generally young men; very steady. The new drill proceeding very satisfactorily under the intelligent and zealous superintendence of Commander Nicholl, an old gunnery officer.

The state of tide and weather prevented the gunboat from going out for target practice.

REPORTS RELATING TO THE

2

The gunboat has since been ordered to lie off Portishead by Admiralty Order.

practice. It is a question for consideration whether the gunboat should lie at moorings at the mouth of the river, instead of at the docks. She would thus be available at all times of tide, but the men would have to proceed to her by rail as far as Portishead; this expense, however, would be covered by a saving of fuel on board the gunboat. The ship and gunboat were very clean and creditable.

“EAGLE,” AT BIRKENHEAD.

One hundred and eleven men on drill; with few exceptions, a very fine body of seamen. The drill going on satisfactorily. There is a want of great gun target practice at this port. The gunboat tender of the coast guard district ship is seldom available, and not one-sixth of the men drilled at Birkenhead have the opportunity of firing at a target. It is to be regretted that a gunboat is not attached to the “Eagle” altogether for the purpose of giving the Naval Reserve an opportunity of learning this most important part of their drill.

The removal of the ship to a berth in the docks, nearer to the ferry, saves the men a quarter of an hour's walk to and from the ship, but it removes them the same distance further from the rifle butts, and, in consequence, it takes the firing party the entire drill day to get through their practice. This, however, is no loss or inconvenience to them.

My inspection here was generally satisfactory, and the ship was clean and creditable.

This has since been done.

Some better accommodation for the officers of the Royal Naval Reserve when on drill is required in this ship, and half the wardroom should be bulkheaded off, and allotted to them, as is now the case in “Dædalus,” at Bristol.

“WINCHESTER,” AT ABERDEEN.

Ninety-six men on drill; one of the finest body of seamen of Naval Reserve I have ever seen together. All the exercises were gone through with much spirit, and without noise. The new exercise in great gun and sword has made good progress in this ship. The target practice, great gun and rifle, at 750 and 800 yards, I much doubt, could have been excelled by seamen of our men-of-war.

My inspection this time at Aberdeen has been the best in these parts.

The ship with her armament is quite obsolete. Her guns, 40 cwt. 32 pounders, are playthings in the hands of such men as drill here during the winter months.

The battery attached to this ship was hastily and too slightly built in the first instance, and is now in a dilapidated state; and, as it will be cheaper in the long run to erect a new one, I would here suggest that a larger shed should be built to carry four guns, two of them to be on carriages and slides of modern pattern, similar to the armament intended for the drill shed at Plumstead Marshes.

DRILL BATTERY AT PETERHEAD.

Twenty-six men on drill, all fine young seamen. The new drill progressing satisfactorily under the zealous and attentive supervision of Mr. Jerome, second class chief officer of Coast Guard, who was qualified on board the “Excellent” for charge of drill of Royal Naval Reserve.

A gale blowing, and strong tide running, carried down the great gun target, and prevented practice taking place with great guns, but an impromptu target was placed at 300 yards on the rocks to seaward, at which the men made excellent practice with their rifles; the chief officer accounting for it from the experience of the men at shooting seals in the Arctic Regions.

I found the battery, magazine, and all connected with the Royal Naval Reserve at this station in good order.

The erection of the battery at this port has given great satisfaction, and has caused a steady increase to the force of the best description of men. No less than 264 men have drilled here during the past 14 months belonging to the port and neighbourhood.

"BRILLIANT," AT DUNDEE.

Sixty-eight men on drill, for the most part younger men than I have hitherto inspected here, but all of a good sort, strong healthy fellows, chiefly employed in the Baltic and Greenland trades.

The new exercises are progressing, but the men were unsteady, which I could only account for by the drill being in a state of transition.

The ship was very clean, and all connected with her creditable.

The following day I ordered a strong party out to the battery at Carnoustie for target practice. The great gun practice was very good, the targets at 800 and 900 yards being riddled. Owing to a strong keen wind across the range blowing the sand into the eyes of the men, it interfered with the aim, and the rifle practice was not so good as usual here.

The ship having been supplied with a few Snider rifles, they were placed in the men's hands for the first time, and they were not long in acknowledging the superiority of the new weapon and acquiring its use.

DRILL BATTERY, BERWICK-ON-TWEED.

Nine men on drill, but six other Naval Reserve men in the port came to the battery to assist in completing a gun's crew and show their efficiency. The whole party fine strong healthy young seamen.

A strong gale blowing at right angles to the range, nevertheless the target practice at great gun and rifle at 800 yards was very good. The breeze was so strong the men had to be kept under shelter of the battery to allow them to take proper aim with their rifles.

The new battery shed is most comfortable, affording ample shelter in bad weather. It is in good order.

I beg to suggest that Mr. Ching, the chief officer of the station, should qualify for charge of a drill battery as soon as the drill season is over here.

DRILL BATTERY, BLYTH HAVEN.

Four men at drill, strong stout able-bodied seamen.

The drill not satisfactory here, as the new exercise has not been introduced yet in consequence of the principal seaman gunner being absent at the "Excellent" to re-qualify, but as only 17 men have taken drill since 1st January not much harm has been done. I have ordered the new drill to be commenced at once, and have since called the attention of the divisional officer to it.

The battery, magazine, and arms found in good order.

"CASTOR," AT NORTH SHIELDS.

Eighty-four fine seamen on drill. I found the new exercises progressing satisfactorily, and the ship, arms, stores, and all in connection with her, in admirable order.

Her tender, the "Bullfrog" gunboat, I also found in very creditable order throughout. The weather was so boisterous and unfavourable no target practice could be had, so the gunboat remained at her moorings.

"DURHAM," AT SUNDERLAND.

Seventy-seven men on drill. The finest and most sailor-like party I have yet seen of the Sunderland Naval Reserve.

New exercises progressing very satisfactorily. No great-gun target practice available at present, as the guns at battery are being re-vented. A party of men was marched to the rifle ranges. The practice was good, but men were a little unsteady.

The ship throughout was most creditable to officers and ship's company. Very clean in spite of the coal dust atmosphere she lives in.

DRILL BATTERY AT SEAHAM.

Thirteen fine young seamen on drill; seven others of Naval Reserve in port came to battery to fall in and make up another gun's crew; in all, 20 very fine specimens of north country seamen.

New drill progressing satisfactorily. The weather was very unfavourable, raining during the whole of the inspection; but the target practice was very good at 800 and 1,200 yards; few shots would have missed an 8 feet square target. The rifle practice not so good; men holding rifles badly and being a little unsteady.

I find a very clannish feeling existing here amongst the Seaham Naval Reserve, and more pride shown in belonging to the force than at some places. The men come to drill uniformly and well dressed. Every eligible young seaman in the port enrolls in the Reserve.

The battery and magazine in good order. The chief officer, Mr. Blackmore, has qualified for charge of drill of Royal Naval Reserve. He appears to be a very intelligent man, and takes much interest in his duties.

The seamen of Reserve at this port are most desirous of having a pattern for a suitable uniform given to them to be worn when at drill and on all national occasions.

"TRINCOMALEE," AT WEST HARTLEPOOL.

I met the whole of the Naval Reserve on drill (28) at the Coast Guard Battery, at Heugh Point; a very fine body of seamen, as all the Hartlepool Naval Reserve are. The drill very satisfactory. Target practice with great guns very good. Rifle practice, at 800 yards, very good; at 400 yards, fair. Men quiet and steady.

In the afternoon I inspected the men on board the ship, and found the new drill progressing. The ship, guns, &c., very clean and creditable.

During my tour I have conferred with the Registrars of Naval Reserve at the different outports connected with the foregoing ships and stations. While all express confidence in the progress of the force, there are some who much regret the loss of young blood to the Reserve, through the stringency of the regulations, which obliges the candidate to prove five years' sea service, of which one year must be A.B.'s time.

On my return to London I inspected the

"PRESIDENT" (WEST INDIA DOCKS).

One hundred and fifty-four men on drill, and eight officers. The men seemed a fair average of the London men, chiefly foreign voyagers. The new entries appear to be younger men. The new drill is progressing satisfactorily. The men worked with good will and tried to do their best, and evident pains appear to have been taken by commanding officer and his staff of instructors to bring the men on. The men belonging to London Division have hitherto laboured under the great disadvantage of having no target practice, but the difficulties met with in former years seem likely to be overcome by the intended erection of a firing battery, now in course of erection, on Plumstead Marshes for their use; and it is hoped that after this they will soon arrive at an equal state of efficiency with the rest of the force.

I found the ship generally clean throughout. The rifle and revolving target were at work, and in good order.

I have now to remark that the seamen of the Royal Naval Reserve seen by me at the outports and at West India Docks during my tour are the prime seamen of the mercantile marine. The Northern men are chiefly employed in the Baltic, Greenland, and North American trades. Those of London and Bristol, &c., are in the East Indian, China, Australian, and Coast of Africa, and coasting trades. The whole forming a fine, intelligent, able-bodied set.

I desire especially to call your attention to the following opinions of the naval medical officers, now connected with the drill ships and port of London, on the physical qualifications of the seamen of the Royal Naval Reserve, as compared with the seamen of the Royal Navy. These professional opinions, coupled with those

those lately given by the commanders of the drill ships, I consider afford conclusive proof that the Royal Naval Reserve is composed of the best class of seamen the nation can produce; and I need hardly say that my own experience during the last four years entirely accords with the above opinions.

The Medical Officer of Her Majesty's Ship "Winchester," at Aberdeen, Peterhead, states:—

"Three hundred and ninety-seven men were medically examined for enrolment in the Royal Naval Reserve by me, between the 1st July 1866 and 15th February 1868. Of these, 382 were found to be physically qualified, and 15 unfit. The latter were rejected for defective vision and hernia. For first entry, 173 were examined, and for re-entry, 224. The average age of the former was 24 years 2 months, and of the latter 30 years. According to documents produced, the first entries averaged $8\frac{1}{4}$ years' service at sea, and the latter $14\frac{3}{4}$, a few having served in the Navy. The mean height and measurement of the chest were respectively 5 ft. 7 in., and 37.2 in., averages it is believed above the stature and capacity of the chests of seamen of the Royal Navy of a like age.

"From these data, taken from the medical examination book kept on board Her Majesty's ship 'Winchester,' as well as from the general appearance of the men drilled here, the inference is, that on the whole they are physically superior to men of the Royal Navy.

The Medical Officer, Her Majesty's Ship "Brilliant," Dundee.

"During the time of my service on board this ship, extending over a period of two years and six months, the number of men that came before me for medical examination have amounted to 559. Out of this number, 18 were found disqualified on account of hernia, varicose veins, and defective vision. Generally speaking, I consider the Royal Naval Reserve a very fine body of men; and in regard to physical qualities, I concur with Dr. Ross, of Her Majesty's ship 'Winchester,' in the belief that they are superior to the men of the Royal Navy."

The Medical Officer, Her Majesty's Ship "Castor," North Shields.

"I have observed upon the Royal Naval Reserve assembled for drill, 145 in number, since I joined on the 13th February 1868, and I consider them, physically speaking, quite equal to the men whom I have met during my servitude in the Royal Navy."

The Medical Officer of Her Majesty's Ship "Durham," Sunderland.

"I have medically examined during my service in this ship, between 12th June 1865 and 3rd March 1868, 835 men; of these, 19 were unfit. The mean age of first entries was 24 years; of second entries, 31 years.

"Six hundred and sixty could read and write; 567 could swim.

"Eight hundred and sixteen were found qualified, and were all fine men, physically equal to the men of Royal Navy."

Medical Officer, Her Majesty's Ship "Trincomalee," West Hartlepool.

"Two hundred and thirty-four men of the Royal Naval Reserve medically examined; of these, 14 were found unfit. Mean age of the 220 qualified was $26\frac{1}{2}$ years; mean height, 5 ft. $6\frac{1}{2}$ in.

"It would be difficult to find a finer body of men in any service than those enrolled at this port (784). They are large, well-formed, muscular, strong, and healthy. They are broad-chested, and their limbs are well developed. They are sober, well-conducted, well lodged and fed. They are also intelligent. Perhaps about nine-tenths of them can read and write. In stature, girth of chest, and strength of limbs, I have never seen a ship's company in the Royal Navy to equal them. The cause of this is no doubt the greater amount and more violent kind of work they are called upon to perform."

The Medical Officer of Her Majesty's Ship "Eagle," Birkenhead.

"From my experience during my period of service on board the 'Eagle,' I consider that the men of the Royal Naval Reserve will compare most favourably, as regards their physical

qualifications, with the seamen of the Royal Navy; in fact, I consider, as a rule, that they are larger and finer men.

“ Three hundred and seventy-four men examined and accepted.

“ Average age, $29\frac{1}{2}$.

“ Height, 5 feet 6 inches.

“ Measurement of chest, 37 inches.”

The Medical Officer of Her Majesty's Ship “ Dædalus,” Bristol.

“ With respect to vigour of constitution, build, and muscular development, I am of opinion that the seamen of the Royal Naval Reserve are on a par with those of Royal Navy.”

The Medical Officer of Her Majesty's Ship “ President,” West India Docks.

“ From the daily inspection and examination of the Royal Naval Reserve during two years and eight-tenths, I am of opinion that eight-tenths are fit for the force.”

Note by Inspector.—The London division of men taking their drill on board “ President,” are a very mixed class, *i. e.*, foreign voyagers, dockmen, riggers, seamen employed at steam factories on the banks of the Thames, coasters, river-men, &c.

Medical Officers employed examining Candidates for the Reserve in the Port of London.

East London (Poplar, Limehouse, &c.)

“ It would be disadvantageous to men of Royal Navy, generally, to compare them with men of Royal Naval Reserve. They are ‘picked men,’ and no finer body, as regards the physical organization, characteristic of sailors, is to be found in any country.

“ Number qualified, 1867—226.

“ Average age, $28\frac{3}{4}$.

“ Height, 5 feet $5\frac{3}{4}$ inches.

“ Chest, $36\frac{1}{2}$ inches.”

London, E.C. (Wells-street, Hammett-street.)

“ In my opinion the men of the Royal Naval Reserve, as regards their physical qualifications, are superior to men of the Royal Navy.

“ Examined and qualified, 477.

“ Average age, $29\frac{1}{2}$.

“ Average height, 5 feet $6\frac{3}{4}$ inches.

“ Measurement of chest, 37 inches.”

Having drawn your attention already to the desire of a number of the Naval Reserve to have a suitable uniform appointed for the force, I shall say nothing further here.

With regard to the drill of the force, I consider it most essential that new armaments should be given to the ships and batteries, and if there is difficulty in supplying modern ordnance, that the carriages and slides of modern construction should supersede those now in use, as imparting the proper knowledge of the new exercise is frustrated by using the old ones. I would also mention that an early substitution of the Snider Rifle for the old Enfield pattern now in use, will be beneficial to the progress and efficiency of training.

(signed) George H. Gardner, Captain R.N.,
Inspector of Royal Naval Reserve.

REPORT of Rear Admiral *Tarleton*.

EFFICIENCY OF ROYAL NAVAL RESERVE.

Submitted,

Coast Guard Office, 10 March 1868.

1. HAVING called for returns from the drill ships of Royal Naval Reserve to ascertain the degrees of efficiency and progress made by the men at drill during the year 1867, I beg to submit a summary of these returns for their Lordships' information.

2. This return does not include the men drilled at the shore batteries, or district ships, of which there are about 5,000. My object in calling for the returns was to elicit the opinions of officers who are competent to judge of the capabilities of seamen.

3. I gave directions to the commanders of the drill ships to be very particular in awarding to the men the correct degrees of efficiency, according to the number of years each man had appeared for drill.

4. I further desired them to state their opinions of the seamen composing the Royal Naval Reserve, and to inform me what they considered the relative value of the Royal Naval Reserve, as compared with seamen of the Royal Navy.

5. The eight commanders of the drill ships are officers of experience, and on whom reliance may be placed. Their estimate of the men is as follows:—Of the 9,000 men of the Royal Naval Reserve who were drilled on board the eight drill ships in 1867, the commanders consider that—

1,250	are fit for petty officers ratings.
1,800	„ „ leading seamen.
4,800	„ good able seamen.
1,150	„ fair able seamen.
9,000	

6. The conduct of the Royal Naval Reserve has been very good, only one man has been dismissed from the force during the year, and three have had retainers stopped for misconduct while on drill. The minor punishments average $1\frac{1}{2}$ per cent. severely fined, and $1\frac{1}{2}$ per cent. slightly fined, or reprimanded.

7. After due consideration of these statements, I think it will appear to their Lordships that the efficiency and conduct of the Royal Naval Reserve, looking at them as a body of volunteers, is satisfactory.

(signed) *J. W. Tarleton*, Commodore,
Controller General.

The Secretary of the Admiralty.

Coast Guard Office, 6 March 1868.

SUMMARY of REPORTS of Degrees of Efficiency and Progress made by the ROYAL NAVAL RESERVE on Board the Eight DRILL SHIPS during the Year 1867.

What Period of Service in Royal Naval Reserve.	Average Age of Men.	Number Drilled on Board the Eight Drill Ships during the Year 1867.	Number qualified to Drill Quarters.	Number of T. M.	Remainder of Officers and Men, showing the Degrees of Efficiency											
					In Great Guns.				Rifle and Sword.				Target Practice.			
					Very Good.	Good.	Fair.	Indifferent.	Very Good.	Good.	Fair.	Indifferent.	Very Good.	Good.	Fair.	Indifferent.
In First Year of Engagement -	23	Officers - 15	2	-	1	8	4	-	1	12	-	-	-	-	-	-
" " "		Men - 1,217	-	13	73	448	631	52	58	391	702	53	106	234	284	45
In Second Year of Engagement -	24	Officers - 9	-	-	-	9	-	-	-	9	-	-	-	-	-	-
" " "		Men - 939	-	12	80	444	373	30	91	410	408	18	143	198	105	40
In Third Year of Engagement -	26	Officers - 13	2	-	8	3	-	-	8	3	-	-	-	6	-	-
" " "		Men - 692	1	44	124	336	167	20	149	311	175	12	148	154	48	20
In Fourth Year of Engagement -	27	Officers - 17	5	-	8	4	-	-	8	4	-	-	-	-	-	-
" " "		Men - 859	2	58	200	439	113	47	219	399	140	41	194	160	48	16
In Fifth Year of Engagement and upwards -	31	Officers - 57	12	-	17	24	4	-	17	24	4	-	-	-	-	-
" " "		Men - 5,288	33	448	1,412	2,694	539	162	1,297	2,468	890	152	1,331	1,339	332	126
TOTAL - -	31	Officers - 111	21	-	34	48	8	-	34	52	4	-	-	6	-	-
		Men - 8,995	36	575	1,889	4,361	1,823	311	1,814	3,979	2,315	276	1,922	2,091	817	247

Remarks.—Owing to the difficulty of obtaining a range in the mercantile ports, only 5,000 of the 9,000 men drilled on board the drill ships have had target practice.

The Secretary of the Admiralty.

(signed) J. W. Tarleton, Commodore.

NAVAL RESERVE.

COPIES of the Report, by Captain Gardner, of his Inspection of the ROYAL NAVAL RESERVE during February and March 1868; and, of the Report of Rear Admiral Taitton to the Admiralty on the RETURNS and REPORTS from DRILL SHIPS of NAVAL RESERVE MEN Drilled during the Year 1867.

(*Mr. Cardish.*)

*Ordered, by The House of Commons, to be Printed,
19 May 1868.*

NAVAL SAVINGS BANKS.

AN ACCOUNT of DEPOSITS in NAVAL SAVINGS BANKS, and the PAYMENTS thereof, and of INTEREST thereon; of all INVESTMENTS under "The NAVAL SAVINGS BANK ACT, 1866"; and the Application of the INTEREST or DIVIDENDS accruing in respect thereof; and of the Proceeds of any SALE of any STOCKS, ANNUITIES, or SECURITIES, during the Financial Year 1866-67.—Prepared pursuant to Section 11 of "The Naval Savings Bank Act, 1866" (29 & 30 Vict. c. 43).

Admiralty, }
12 June 1868.

JOHN HENRY BRIGGS,
Chief Clerk.

AN ACCOUNT of DEPOSITS in NAVAL SAVINGS BANKS, and the PAYMENTS thereof, and of INTEREST thereon; of all INVESTMENTS under "The NAVAL SAVINGS BANK ACT, 1866"; and the Application of the INTEREST or DIVIDENDS accruing in respect thereof; and of the Proceeds of any SALE of any STOCKS, ANNUITIES, or SECURITIES, during the Financial Year 1866-67.

(FIRST BANK established on board Her Majesty's Ship "Victoria," 1 January 1867.)

Deposits received, 1 January to 31 March 1867	-	-	-	-	-	£.	s.	d.
Interest accrued	-	ditto	-	ditto	-	-	-	-
						£.	3,292	11 5
Deposits withdrawn, 1 January to 31 March 1867	-	-	-	-	-	£.	s.	d.
Interest paid	-	-	ditto	-	ditto	-	-	-
							93	15 5
Balance due 31 March 1867:								
Deposits	-	-	-	-	-	3,188	5	-
Interest	-	-	-	-	-	10	11	-
							3,198	16 -
						£.	3,292	11 5
Number of accounts opened	-	-	-	-	-	-	276	
Number of accounts closed	-	-	-	-	-	-	7	
Open 31 March 1867	-	-	-	-	-	-	269	

No investment made of the deposits received.

Admiralty, }
26 May 1868.

J. Beeby,
Accountant General of the Navy.

NAVAL SAVINGS BANKS.

ACCOUNT of DEPOSITS in NAVAL SAVINGS BANKS,
and the PAYMENTS thereof, and of INTEREST thereon;
of all INVESTMENTS under "The NAVAL SAVINGS BANK
Act, 1866"; and the APPLICATION of the INTEREST or
DIVIDENDS accruing in respect thereof; and of the
PROCEEDS of any SALE of any STOCKS, ANNUITIES, or
SECURITIES, during the Financial Year 1866-67.

(Presented pursuant to Act 29 & 30 Vict. c. 43.)

*Ordered, by The House of Commons, to be Printed,
18 July 1868.*

NAVAL PRIZE MONEY, &c.

AN ACCOUNT

SHOWING THE

RECEIPT AND EXPENDITURE

OF

NAVAL PRIZE, BOUNTY, SALVAGE, AND OTHER MONEYS,

BETWEEN THE

1st APRIL 1867 and the 31st MARCH 1868.

Admiralty, }
9 July 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

(Presented pursuant to Act 27 & 28 Vict. c. 24.)

Ordered, by The House of Commons, to be Printed,
10 July 1868.

AN ACCOUNT showing the RECEIPT and EXPENDITURE of NAVAL PRIZE, BOUNTY,

(Prepared pursuant to Her Majesty's Order in Council of the

UNCLAIMED SHARE ACCOUNT PRIOR TO 1 APRIL 1865:				
To Balance of Unclaimed Prize, Bounty, Salvage, and other Moneys remaining in the hands of Her Majesty's Paymaster General at the Bank of England, on the 1st April 1867	£.	s. d.	£.	s. d.
	4,703	18 1		
To Amount of a share transferred from Prize Forfeitures by desertion, the man not having deserted	1	18 -		
			4,705	16 1
GOVERNMENT PER-CENTAGE ACCOUNT:				
To Balance of Amount of per-centage deductions, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867	1,150	9 3		
To Amount of per-centage deductions from the net sums distributable, brought to account in the year	1,378	11 -		
			2,529	- 3
PRIZE FORFEITURES BY DESERTION, &c.:				
To Balance of Amount of shares forfeited by desertion, &c., remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867	526	- 4		
To Amount of shares forfeited by desertion, &c., brought to account during the year	211	16 -		
			737	16 4
SLAVE AND TONNAGE BOUNTY:				
To Balance of the Proceeds of the Sale of certain Slave Vessels, including Slave and Tonnage Bounties awarded, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867, and detailed in Paper (A.) annexed	5,238	9 1		
To Proceeds of the Sale of certain Slave Vessels captured by Her Majesty's ships, including the amount of Slave and Tonnage Bounties awarded, as per Paper (A.) annexed, paid to the Naval Prize Account of Her Majesty's Paymaster General at the Bank of England under Her Majesty's Order in Council of the 5th December 1865 (pursuant to Act 27 & 28 Vict. c. 24)	24,955	9 6		
			30,193	18 7
SALVAGE SERVICES RENDERED BY HER MAJESTY'S SHIPS:				
To Balance of Amount recovered from the Owners of certain Vessels for Salvage Services rendered to them by Her Majesty's ships, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867	2,031	2 5		
To Amount received from the Owners of the Merchant Vessel "Mewah" for Salvage Service rendered by Her Majesty's ship "Wasp," and paid to the Account of Her Majesty's Paymaster General at the Bank of England, between the 1st April 1867 and 31st March 1868, under Her Majesty's Order in Council of 5th December 1865 (pursuant to Act 27 & 28 Vict. c. 24)	2,500	-		
			4,531	2 5
Carried forward	-	-	£.	42,697 13 8

Salvage, and other MONEYS, between the 1st April 1867 and the 31st March 1868.
(in December 1865, under Act 27 & 28 Vict. c. 24.)

UNCLAIMED SHARE ACCOUNT PRIOR TO 1ST APRIL 1865:		£.	s.	d.	£.	s.	d.
By Amount of Unclaimed Shares of Prize, Bounty, Salvage, and other Moneys paid during the year out of the Balance, &c., per contra - - - - -		-	-	-	241	19	-
Note.—The sum of 36,000 £. (in addition to the 173,000 £. referred to in the Annual Account for 1854–55, 233) has been transferred from this Account to the Consolidated Fund, between 1st April 1855 and 31st March 1865, and is available, under the 17th section of Act 27 & 28 Vict. c. 24, for the payment of any claim on account thereof, which the Naval Prize Cash Balance may not be sufficient to meet.							
GOVERNMENT PER-CENTAGE ACCOUNT:							
By Amount of Allowance paid to the Accountant General, and to the Clerk for preparing the Annual Account - - - - -		150	-	-			
By Amount of Share allowed to be paid, under the authority of the Lords Commissioners of the Admiralty, after distribution had taken place - - -		1	2	9	151	2	9
PRIZE FORFEITURES BY DESERTION, &c.:							
By Shares paid under the authority of the Lords Commissioners of the Admiralty, the forfeiture being removed - - - - -		-	-	-	91	18	2
SLAVE AND TONNAGE BOUNTY:							
By Amount paid during the year out of the Balance and Receipts, per contra, as detailed in Paper (A.) annexed - - - - -		-	-	-	11,946	11	7
SALVAGE SERVICES RENDERED BY HER MAJESTY'S SHIPS:							
By Amount distributed and paid out of the Balance and Receipts for Salvage Service, per contra, viz. :—							
Salvage Service rendered to the “Alma,” by H.M.S. “Furious” and “Cyclops” - - - - -		8	8	-			
Ditto - - ditto - - - - “Ava,” by H.M.S. “Retribution” - - -		1	6	-			
Ditto - - ditto - - - - “Hebe of the Exe,” by H.M.S. “Curlew” - - -		13	5	3			
Ditto - - ditto - - - - “Latona,” by H.M.S. “Argus” - - -		59	7	5			
Ditto - - ditto - - - - “Energy,” by H.M.S. “Surprise” - - -		506	19	11			
Ditto - - ditto - - - - “Medea,” by H.M.S. “Lark” - - -		143	11	10			
Ditto - - ditto - - - - “Mewah,” by H.M.S. “Wasp” - - -		88	6	6	821	4	11
Carried forward - - - - -	£.	13,252	16	5			

AN ACCOUNT showing the RECEIPT and EXPENDITURE of NAVAL PRIZE, BOUNTY,

	£. s. d.	£. s. d.
Brought forward - - - -	- - -	42,697 13 8
BOUNTY FOR DESTRUCTION OF PIRATES:		
To Balance of Amount of Bounty Money awarded to the Officers and Crews of Her Majesty's ships, under Votes of Parliament, for the destruction of Pirates, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867 - - - -	2,419 1 2	
To Amount of Bounty Money awarded for destruction of Pirates in the China Seas, to the Officers and Crews of the undermentioned ships, and voted by Parliament in conformity with Act 13 & 14 Vict. c. 26, paid to the Naval Prize Account of Her Majesty's Paymaster General at the Bank of England, by order of the Lords of the Treasury, viz.:—		
H.M. Gunboat "Leven," 4th November 1865 - - - -	200 - -	
Ditto "Opossum," 29th October 1864 to 17th October 1865 - (Including 150 <i>l.</i> 8 <i>s.</i> 11 <i>d.</i> Proctor's Expenses, paid out of Naval Votes.)	1,150 8 11	
Ditto - - ditto 11th to 14th February 1866 - - -	1,000 - -	
Moiety of the Proceeds of a Piratical lorch captured by H.M. ship "Bustard," 15 May 1865 - - - -	326 14 6	
To Amount of Shares in Pirate Bounty to H.M. ship "Grasshopper," August and October 1864, on which forfeiture by desertion has been removed - - -	89 9 4	5,185 13 11
BOOTY CAPTURED IN PEGU:		
To Balance of portion of Booty captured by the Naval and Military Forces in Pegu in 1852-3, allotted to the Officers and Crews of Her Majesty's ships, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867 - - - -	947 1 11	
To Amount of Share reported forfeited by desertion in error - - - -	10 10	947 12 9
BOOTY CAPTURED IN CHINA:		
To Balance of portion of Booty captured at Canton by the Naval and Military Forces, on the 28th and 29th December 1857, awarded to the Naval Squadron, and remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st of April 1867 - - - -	- - -	1,254 16 9
GRANT FOR SPECIAL SERVICE ON THE CHINA STATION:		
To Balance of Amount voted by Parliament to the Naval Force employed on the China Station between the 1st October 1856 and 26th June 1858, of 30 days' additional pay, remaining in the hands of Her Majesty's Paymaster General at the Bank of England, unclaimed on the 1st April 1867 - - - -	- - -	5,990 5 9
CAPTURES FOR BREACH OF BLOCKADE OF THE CANTON RIVER:		
To Balance of the Net Proceeds of Junks captured by Her Majesty's ships between the 29th August and 19th December 1857, remaining in the hands of Her Majesty's Paymaster General at the Bank of England, on the 1st April 1867 - - - -	- - -	1,581 1 11
Carried forward - - -	£.	57,657 4 9

SALVAGE, and other MONEYS, between the 1st April 1867 and the 31st March 1868—continued.

	£.	s.	d.	£.	s.	d.
Brought forward - - - -	-	-	-	13,252	16	5
BOUNTY FOR DESTRUCTION OF PIRATES:						
By Amount distributed and paid out of the Balance and Receipts, per contra, viz.:—						
Pirate Bounty to H.M.S. "Hornet" - - - - -	2	16	2			
Ditto - - ditto - "Magicienne," 26 August to 4 September 1858	4	14	9			
Ditto - - ditto - "Hesper," &c., 20 April 1858 - - -	1	8	6			
Ditto - - ditto - "Fury," &c., December 1858 - - -	2	14	-			
Ditto - - ditto - "Surprise" and boats of "Cambrian" - -	13	8	-			
Ditto - - ditto - "Kestrel," July 1860 - - - - -	19	13	5			
Ditto - - ditto - "Kestrel," November 1861 - - - - -	2	9	3			
Ditto - - ditto - "Grasshopper," and boat of "Esk" - -	11	18	10			
Ditto - - ditto - "Encounter," &c., October 1862 - - -	25	5	4			
Ditto - - ditto - "Snake," August 1862 - - - - -	5	18	3			
Ditto - - ditto - "Haughty," December 1863, to January 1864 -	161	3	10			
Ditto - - ditto - "Bustard," November 1863 - - - - -	33	10	8			
Ditto - - ditto - "Grasshopper," August 1864 - - - - -	437	4	2			
Ditto - - ditto - "Grasshopper," October 1864 - - - - -	60	4	8			
Ditto - - ditto - "Leven," 4 November 1865 - - - - -	93	15	8			
Ditto - - ditto - "Opossum," 29 October 1864 to 17 October 1865 - - - - -	588	1	2			
Ditto - - ditto - "Opossum," 11 to 14 February 1866 - -	484	12	5			
Moiety of the Proceeds of a Piratical lorch, captured by H.M.S. "Bustard," 15 May 1865 - - - - -	198	18	3			
				2,147	17	4
BOOTY CAPTURED IN PEGU:						
By Amount distributed and paid out of the Balance of the portion of Booty allotted to the Officers and Crews of Her Majesty's ships, per contra - -						
	-	-	-	14	6	-
BOOTY CAPTURED IN CHINA:						
By Amount distributed and paid out of the Balance, per contra - - -						
	-	-	-	32	12	3
GRANT FOR SPECIAL SERVICE ON THE CHINA STATION:						
By Amount distributed and paid out of the Balance of the Grant of Parliament, per contra - - - - -						
	-	-	-	39	7	6
CAPTURES FOR BREACH OF BLOCKADE OF THE CANTON RIVER:						
By Amount distributed and paid out of the balance of the Net Proceeds of the Junks, awarded as per contra - - - - -						
	-	-	-	25	4	10
Carried forward - - -	-	-	£.	15,512	4	4

AN ACCOUNT showing the RECEIPT and EXPENDITURE of NAVAL PRIZE, BOUNTY,

	£. s. d.	£. s. d.
Brought forward - - - -	- - -	57,657 4 9
INDIAN PRIZE MONEY:		
To Balance of shares allotted to the Naval Brigade of Her Majesty's ship "Shannon," employed at Lucknow during the Indian Mutiny, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867 - - - - -	358 14 -	
To Balance of shares of the Satasee Booty captured by the Sarun Field Force on the 11th January 1858, allotted to the Naval Brigade of Her Majesty's ship "Pearl," employed on shore during the Indian Mutiny, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867 - - - - -	518 7 4	
		877 1 4
GRANT FOR STORES CAPTURED AT KERTCH AND YENIKALE IN 1855:		
To Balance of portion of the Grant of Parliament for stores captured at Kertch and Yenikale in 1855 by the Naval and Military Forces, allotted to Her Majesty's ships, remaining in the hands of Her Majesty's Paymaster General at the Bank of England on the 1st April 1867 - - - - -	- - -	7,566 10 3
ADVANCE ACCOUNT IN ANTICIPATION OF PROCEEDS:		
To Sums repaid by the Treasury, &c., during the year - - - - -	- - -	543 11 6
	£:	66,644 7 10

Admiralty, 8 June 1868.

The foregoing Account has been examined with the Books, Vouchers, and other Documents kept in the Accountant-
Examined, *H. T. D. Bathurst*, Inspector.

SALVAGE, and other MONEYS, between the 1st April 1867 and the 31st March 1868—continued.

	£.	s.	d.	£.	s.	d.
Brought forward - - - -	-	-	-	15,512	4	4
INDIAN PRIZE MONEY:						
By Amount distributed and paid out of the Balances, per contra, viz:—						
To the Naval Brigade of Her Majesty's ship "Shannon" - - -	7	2	-			
Ditto - - - ditto - - - - - "Pearl" - - - - -	22	18	5			
				30	-	5
GRANT FOR STORES CAPTURED AT KERTCH AND YENIKALE IN 1855:						
By Amount distributed and paid out of the Balance of the Grant of Parliament, per contra - - - - -	-	-	-	99	14	9
ADVANCE ACCOUNT IN ANTICIPATION OF PROCEEDS:						
By Balance of Amount on the 1st April 1867, advanced to meet Expenses of Captures, under the authority of the Registrar of the High Court of Admiralty, in anticipation of Proceeds - - - - -	-	-	-	543	11	6
By Balance, viz:—						
Unclaimed Share Account prior to 1st April 1865 - - - - -	4,463	17	1			
Government per-centage Account - - - - -	2,377	17	6			
Prize Forfeitures by Desertion, &c. - - - - -	645	18	2			
Slave and Tonnage Bounty - - - - -	18,247	7	-			
Salvage Services rendered by Her Majesty's ships - - - - -	3,709	17	6			
Bounty for Destruction of Pirates - - - - -	3,037	16	7			
Booty captured in Pegu - - - - -	933	6	9			
Booty captured in China - - - - -	1,222	4	6			
Grant for Special Service on the China Station - - - - -	5,950	18	3			
Captures for Breach of Blockade of the Canton River - - - - -	1,555	17	1			
Indian Prize Money - - - - -	847	-	11			
Grant for Stores captured at Kertch and Yenikale in 1855 - - - - -	7,466	15	6			
				* 50,458 16 10		
* Including 9,000 £. transferred since 1st April 1865 to the Consolidated Fund.				£.	66,644	7 10

J. Beeby,
Accountant General of the Navy.

General's Department at the Admiralty, and the Account is found to be correct. Dated the 7th day of July 1868.

Wm. Dunbar,
Comptroller General of the Receipt and Issue of Her Majesty's Exchequer,
and Auditor General of Public Accounts.

Name unknown	-	-	-	-	-	12 11 8	-	-	-	-	-	12 11 8	4 July 1864.
Ditto	-	-	-	-	-	14 - 5	-	-	-	-	-	14 - 5	4 July "
Ditto	-	-	-	-	-	15 3 9	-	-	-	-	-	15 3 9	9 Aug. "
Island Queen	-	-	-	-	-	65 17 7	-	-	-	13 2 7	-	52 15 -	22 Aug. "
Three dhows (names unknown)	-	-	-	-	-	38 2 7	-	-	-	4 15 3	-	33 7 4	25 July "
Two ditto - ditto	-	-	-	-	-	22 6 3	-	-	-	2 2 6	-	20 3 9	9 Aug. "
Name unknown	-	-	-	-	-	47 17 8	-	-	-	19 - 3	-	28 17 5	23 Jan. 1866.
Margareta	-	-	-	-	-	22 6 9	-	-	-	-	-	22 6 9	7 Nov. 1864.
Haydee	-	-	-	-	-	76 12 6	-	-	-	15 13 1	-	60 19 5	10 Oct. "
Laura	-	-	-	-	-	33 12 7	-	-	-	4 19 3	-	28 13 4	26 May 1865.
Name unknown	-	-	-	-	-	25 8 5	-	-	-	2 6 -	-	28 2 5	10 April "
Penguin, tender to Nar-	-	-	-	-	-	40 6 3	-	-	-	4 8 2	-	35 18 1	10 April "
cissus.	-	-	-	-	-	52 15 10	-	-	-	4 13 6	-	48 2 4	10 April "
Ditto	-	-	-	-	-	14 13 2	-	-	-	3 17 8	-	10 15 6	21 Feb. "
Ditto	-	-	-	-	-	12 16 11	-	-	-	3 4 8	-	9 12 8	21 Feb. "
Ditto	-	-	-	-	-	19 4 1	-	-	-	6 8 1	-	12 16 -	16 May "
Salamathi	-	-	-	-	-	51 8 6	-	-	-	2 16 4	-	48 12 2	10 March "
Mumbo Zaza	-	-	-	-	-	53 12 7	-	-	-	2 4 8	-	51 7 11	10 March "
Name unknown	-	-	-	-	-	6 17 8	-	-	-	4 13 2	-	2 4 6	21 March "
Ditto	-	-	-	-	-	11 10 8	-	-	-	7 16 1	-	3 14 7	21 March "
Ditto	-	-	-	-	-	33 16 2	-	-	-	22 17 6	-	10 18 8	21 March "
Ditto	-	-	-	-	-	30 6 8	-	-	-	21 16 -	-	8 10 8	21 March "
Ditto	-	-	-	-	-	13 3 2	-	-	-	9 9 3	-	3 13 11	21 March "
Ditto	-	-	-	-	-	44 6 3	-	-	-	29 19 7	-	14 6 8	21 March "
Two dhows (names unknown)	-	-	-	-	-	116 17 7	-	-	-	58 13 5	-	58 4 2	{ 21 March "
Name unknown	-	-	-	-	-	28 13 8	-	-	-	18 11 3	-	10 2 5	{ 15 June "
Ditto	-	-	-	-	-	16 8 10	-	-	-	10 19 3	-	5 9 7	21 March "
Two dhows (names unknown)	-	-	-	-	-	48 16 4	-	-	-	32 10 11	-	16 5 5	21 March "
Name unknown	-	-	-	-	-	14 14 4	-	-	-	1 6 9	-	13 7 7	17 Feb. "
Ditto	-	-	-	-	-	12 2 5	-	-	-	8 1 8	-	4 - 9	21 March "
Ditto	-	-	-	-	-	2 7 4	-	-	-	-	-	2 7 4	1 May "
America	-	-	-	-	-	113 9 1	-	-	-	95 8 6	-	18 - 7	22 May "
Name unknown	-	-	-	-	-	146 5 6	-	-	-	32 7 4	-	113 18 2	26 June "
Lee, tender to Rattle-	-	-	-	-	-	2,982 13 1	-	-	-	550 14 5	-	2,431 18 8	
snake.	-	-	-	-	-	2,982 13 1	-	-	-	550 14 5	-	2,431 18 8	
Carried forward -	-	-	-	-	-	2,982 13 1	-	-	-	550 14 5	-	2,431 18 8	
	-	-	-	-	-	2,982 13 1	-	-	-	550 14 5	-	2,431 18 8	

(A).—STATEMENT of Slave and Tonnage Bounty—*continued*.

DESCRIPTION OF PRIZE.	BY WHAT SHIP CAPTURED.	Date of Capture.	Balance remaining for Distribution or Payment on 1 April 1867.	Proceeds, &c., paid into Naval Prize Account in the Year 1867-68.	TOTAL.	Distributed, or Paid, in the Year 1867-68.	Balance on 1 April 1868.	First Day of Distribution.
			£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	
		Brought forward - - -	2,982 13 1	- - -	2,982 13 1	550 14 5	2,431 18 8	1 May 1865
Melvira or Charles	- - -	22 July 1864	19 15 11	- - -	19 15 11	- - -	19 15 11	1 May 1865
Name unknown - - -	- - -	14 March 1863	48 5 9	- - -	48 5 9	20 6 2	27 19 7	15 June "
Ditto - - -	- - -	27 Feb. "	45 15 11	- - -	45 15 11	6 16 3	38 19 8	1 June "
Ditto - - -	- - -	15 April 1864	47 4 8	- - -	47 4 8	5 1 6	42 3 2	15 Aug. "
Ditto - - -	- - -	3 June "	4 11 6	- - -	4 11 6	- - -	4 11 6	24 June "
Ditto - - -	- - -	1 to 5 July "	539 17 11	- - -	539 17 11	507 11 7	32 6 4	19 Sept. "
Two dhows (names unknown)	- - -	20 April "	37 - 9	- - -	37 - 9	22 13 5	14 7 4	4 July "
Name unknown - - -	- - -	16, 18 May "	16 2 9	- - -	16 2 9	10 - 6	6 2 3	4 July "
Three dhows (names unknown)	- - -	22 August 1863	69 3 7	- - -	69 3 7	23 1 9	46 1 10	{ 18 Aug. " 14 Dec. " 18 Aug. " 14 Dec. "
Name unknown - - -	- - -	23 August "	17 15 9	- - -	17 15 9	6 3 -	11 12 9	{ 18 Aug. " 14 Dec. " 14 Dec. "
Ditto - - -	- - -	2 March 1862	21 3 7	- - -	21 3 7	9 15 7	11 8 -	8 Aug. "
Ditto - - -	- - -	9 August "	37 14 9	- - -	37 14 9	1 16 -	35 18 9	26 Sept. "
Ditto - - -	- - -	23 Sept. "	188 11 2	- - -	188 11 2	18 17 9	169 13 5	2 Feb. 1866.
Ditto - - -	- - -	14 Sept. 1864	23 8 9	- - -	23 8 9	10 12 7	12 16 2	23 Feb. "
Ditto - - -	- - -	4 January 1865	28 - -	- - -	28 - -	12 15 2	15 4 10	27 Feb. "
Ditto - - -	- - -	18 Nov. 1864	152 1 -	- - -	152 1 -	81 2 -	70 19 -	16 Feb. "
Ditto - - -	- - -	1 August 1863	74 7 9	- - -	74 7 9	23 5 4	51 2 5	29 May "
Ditto - - -	- - -	30 March 1864	36 10 11	- - -	36 10 11	28 4 5	8 6 6	6 Aug. "
Ditto - - -	- - -	31 March "	27 16 2	- - -	27 16 2	21 9 7	6 6 7	6 Aug. "
Ditto - - -	- - -	11 April "	16 2 11	- - -	16 2 11	12 9 5	3 13 6	17 Aug. "
Ditto - - -	- - -	14 May "	41 1 2	- - -	41 1 2	31 14 3	9 6 11	17 Aug. "
Ditto - - -	- - -	15 May "	22 19 5	- - -	22 19 5	17 15 -	5 4 5	17 Aug. "
Ditto - - -	- - -	4 May 1865	94 10 -	- - -	94 10 -	67 5 6	27 4 6	22 Aug. "
Ditto - - -	- - -	15 May "	45 7 2	- - -	45 7 2	32 6 -	13 1 2	22 Aug. "
Ditto - - -	- - -	6 October "	480 2 3	- - -	480 2 3	418 15 4	61 6 11	25 Oct. "
Ditto - - -	- - -	12 May "	84 2 6	- - -	84 2 6	836 15 4	960 17 2	19 Nov. 1867.
Ditto - - -	- - -	28 July 1866	36 2 -	- - -	36 2 -	- - -	36 2 -	Awaiting award of bounty.
Ditto - - -	- - -	15 April 1865	- - -	- - -	- - -	334 - 6	312 9 6	16 July 1867.

NAVAL PRIZE MONEY, &c.

ACCOUNT showing the RECEIPT and EXPENDITURE of NAVAL PRIZE, BOUNTY, SALVAGE, and other MONIES, between the 1st April 1867 and the 31st March 1868.

(Presented pursuant to Act 27 & 28 Vict. c. 24.)

Ordered, by The House of Commons, to be Printed,
10 July 1868.

NAVY (TRANSPORTS).

RETURN to an Order of the Honourable The House of Commons,
dated 9 June 1868;—for,

RETURN “ (in a Tabulated Form) of Cost, Tonnage, Power, and Consumption of Coal of the TRANSPORTS ‘SERAPIS,’ ‘MALABAR,’ ‘CROCODILE,’ ‘JUMNA,’ and ‘EUPHRATES;’ showing, also, the Expense of conducting the Service in conveying the INDIAN RELIEFS, to and from *India*, during the past Season :—

Name.
Tonnage.
Dimensions.
Builder.
Contract Price paid Builder.
Amount of Extras claimed by or paid to Builder.
Cost of Work done in Dockyards, if any.
Cost of Stores supplied by Transport Department for Accommodation of Troops and Officers, irrespective of Fittings supplied by Builder.
Estimated Cost of Ship ready for Service.
Description of Engine.
Maker.
Nominal Power.
Diameter of Cylinder.
Length of Stroke.
Mean Speed at Measured Mile, Full Power.
Ditto, Half Power.
Indicated Horse-Power at Measured Mile, Full Speed.
Ditto, Half Speed.
On which Side of Isthmus Ship stationed.
Mean Speed of each Ship on Completed Voyages.
Total Distance Run by each Ship.
Total Coals Consumed by each Ship.
Average Number of Troops carried each Voyage, distinguishing Officers, &c.
If any break down of Hull or Machinery, state Cause, Name of Ship, Number of Days Delay, and probable Expense of Repair.
Total Value of Stores expended on Hull, Engines, &c. for the Completed Voyage.
Cost of Victualling Troops, including Messing.
Cost of Victualling Ship's Company, including Messing.
Total Amount of Officers and Men's Pay, including any Allowances.
Estimated Gross Cost of Service to and from India per Head for each Class, calculated on the Average Numbers Conveyed on the Two Completed Voyages.

India Office, }
24 July 1868. }

T. T. PEARS, Major General,
Military Secretary.

(Mr. Graves.)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

COST OF TROOP SHIPS ("CAPITAL"
CHARGES).

471.

13. Contract Price paid Builder	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.
13. Contract Price paid Builder	190,914	180,441	195,608	195,721	195,100												
14. Amount of Extras claimed by, or paid to, Builder	(See Remarks)	3,596 (disallowed)	4,480 (disallowed)	43,823 (See Remarks)	1,359												
	1,203	1,123	1,400	1,254													
15. Cost of Work done in Dockyards -	711	873	460	495	450												
16. Extra Works paid for through Transport Department, but not performed at the Dockyards, or by Builder.	1,490	1,552	1,491	1,356	1,470												
17. Cost of Naval Stores supplied from the Dockyards, &c., to complete the Equipment of the Ships for Sea.	2,300	2,300	3,000	3,400	3,050												

The figures in *roman* represent the sums paid to the builders, and those in *italic*, further claims made by them.

In the case of the "Serapis," compensation (no specific sum being mentioned) was requested by the contractors, on the ground of novelty of design, expensive character of fittings, &c. This was refused, but the contractors were informed that if they had any objections to raise in regard to the interpretation of the contract, the Controller of the Navy would hear their reasons and decide on their case.

Similarly the contractors of the "Crocodile," in claiming further payment, were informed that if they desired a reference of points in dispute to the Controller, he would hear and decide on their case.

The claim for the "Euphrates" was disallowed; and no further claims have been made in the case of the "Malabar."

The claims of the contractors for the "Jumna" are not yet decided on. They will shortly be considered by the Controller of the Navy, as judge between the contractors and the Admiralty officers.

The figures inserted represent the cost of labour and materials at the dockyards, but in the case of the "Serapis" and "Crocodile," so far only as admitted as chargeable to Indian Revenues, from being considered part of *first cost* of the ships.

Including remuneration to Doctor Edmonds, on account of the application of his ventilating system to the ships.

Includes cost of chronometers and charts.

RETURN of Cost, Tonnage, Power, and Consumption of Coals of the Transports (Troop Ships) "Serapis," "Malabar," "Crocodile," "Jumna," and "Euphrates;" &c.—continued.

PARTICULARS REQUIRED.		SERAPIS.	CROCODILE.	EUPHRATES.	JUMNA.	MALABAR.	REMARKS.
COST OF TROOP SHIPS ("Capital" Charges) — continued.		£.	£.	£.	£.	£.	
18. Cost of Stores supplied by Transport Department for accommodation of Troops and Officers, irrespective of Fittings supplied by Builder.		5,800	5,950	5,600	5,650 9149	5,700	Includes portable cabin furniture, lamps, mess articles, &c., for the saloon, the fitting up the dispensaries for troops, the provision of the usual Army Hospital utensils, stores, &c., and a supply of books and games for the troops. * The additional charge of 149 <i>l.</i> made by Messrs. Palmer for portable cabin furniture supplied to the "Jumna," is not yet admitted, being under consideration in the Department of the Controller of the Navy. The amounts inserted provide for the settlement of some small outstanding claims.
19. Cost of Supervision of Construction	- - -	1,775	2,073	1,698	2,370	1,996	Includes, in the case of each ship, a <i>proportion</i> of the charges common to all the ships for supervision; and of the expenses incurred for the employment of draughtsmen, &c.
20. Estimated Cost of Ship ready for Service (irrespective of Pay of Officers, &c., prior to Ship being completed).		204,193	203,292	209,257	210,395	209,125	
21. Expenses, in addition to the foregoing, incurred in the case of the "Serapis" and "Crocodile," until 31st March 1867; and for the "Euphrates," "Jumna," and "Malabar," until their arrival in India: being in the first two instances Pay and Allowances, &c., of Officers and others whom it was considered expedient to appoint to the Ships before they were complete; and, in the remaining cases, of Pay and Allowances of Officers and Crews, Messing and Victualling, and general Cost of <i>Navigation of the three Ships from England to India.</i>		900	850	15,600	17,400	17,300	Some military officers (whose passages were chargeable to Indian Revenues) were conveyed, with their families, in the Troop Ships to Bombay and Calcutta; but <i>no credit</i> has been taken, in the computation of the amounts stated against this head of expenditure, for the <i>saving</i> effected by the ships being so utilized, neither has credit been taken for saving of freight to the Government of India, by the conveyance, in the Troop Ships, of large quantities of Snider ammunition intended for the service of troops stationed in India.
22. Total (approximate) Cost of each Ship to Indian Revenues, at date of commencement of the first Overland Troop Season, 1867-68.		205,093	204,142	224,857	227,795	226,425	
Further Particulars respecting the Troop Ships, and Results of the First Overland Troop Season:							
23. On which side of the Isthmus Ship stationed	-	European	-	Indian	-	Indian.	
24. Mean Speed of each Ship for the Season	-	9-438 knots	9-550 knots	9-700 knots	7-856 knots	9-318 knots.	
25. Total Distance run by each Ship in the Season	-	23,869 knots	24,383 knots	19,139 knots	19,093 knots	17,732 knots.	

26. Total Coals consumed by each Ship in the Season	6,630 tons	6,438 tons	6,911 tons (See Remarks.)	8,161 tons (See Remarks.)	6,165 tons	Includes, in the case of the "Euphrates," the coal consumed on voyage from Bombay to Suez (without troops on board), to be in readiness to receive troops at commencement of season; and in case of "Jumna," the coal consumed on return voyage from Suez to Bombay at close of season.
Officers - - - - Ladies - - - - Children - - - - Female Servants - - 2nd Class Passengers, viz: Male - - - - Female - - - - Children - - - - Staff Sergeants - - Women - - - - Children - - - - Troops - - - - Women - - - - Children - - - -	44 13 14 5 - 1 1 - 10 7 14 825 85 119	52 13 13 3 - - - 11 6 13 877 64 75	49 11 11 5 - - - 7 4 9 902 74 95	44 12 13 2 1 1 1 12 7 15 803 79 105	44 15 15 5 - 2 10 8 14 831 69 93	Including all troops.

27 A. Average Number of Troops carried each Voyage (distinguishing Officers, &c.)

PARTICULARS REQUIRED.

Further Particulars respecting the Troop Ships, and Results of the First Overland Troop Season:

Officers - - - - Ladies - - - - Children - - - - Female Servants - - 2nd Class Passengers, viz: Male - - - - Female - - - - Children - - - - Staff Sergeants - - Women - - - - Children - - - - Troops - - - - Women - - - - Children - - - -	456 84 56 28 - 2 4 61 46 72 7,293 754 747	304 125 162 38 4 6 14 95 60 131 6,234 428 803	Exclusive of a small number of troops conveyed for Imperial service.
--	---	---	--

27 B. Total Number of Troops conveyed during Season.

Total Number of Officers, Troops, &c., conveyed during the Overland Season, 1867-68

Equivalent to 17,016 Adults.

1,125

On the Voyages Outward the deaths were, 1 adult and 15 children; and 27 children were born. On the Voyages Homeward the deaths were, 10 adults and 16 children; and 18 children were born. Making a total of 42 deaths and 45 births.

RETURN of Cost, Tonnage, Power, and Consumption of Coals of the Transports (Troop Ships) "Serapis," "Malabar," "Crocodile," "Junna," and "Euphrates;" &c.—*continued.*

PARTICULARS REQUIRED.	SERAPIS.	CROCODILE.	EUPHRATES.	JUMNA.	MALABAR.	REMARKS.
Further Particulars respecting the Troop Ships, and Results of the First Overland Troop Season—continued.						
28. If any break down of Hull or Machinery, state cause, number of days' delay, and probable expense of refit.	£.	£.	£.	£.	£.	
Break-down of hull - - -	Nil	- Nil - - -	Nil	- Nil - - -	Nil	
Break-down of machinery - -	Nil	- Bearings and thrust required adjustment, and flywheel of foremost auxiliary engine broken. (This occurred in November 1867, on return voyage from Alexandria. Defects made good at Portsmouth.) <i>Delay, six days.</i>	Nil	- Defective working of the machinery necessitated considerable repairs at Calcutta in September 1867. <i>Delay, 12 days.</i> On her way to Suez the engines again exhibited defects, principally in the slide valve gearing. On her arrival at Suez she was taken in hand, and repairs were effected. <i>Delay. She was unable to leave Suez until 14 days beyond the proper date, but her place was taken by the ship intended to be worked in reserve; thus no delay in performing the troop service occurred.</i> On her arrival at Bombay, at the end of the troop season, her engines and boilers were examined by a committee of professional and other officers, who pronounced that the defects resulted from "faults in construction," and that it would be necessary for her to return to Suez or England for a thorough repair. The repairs were executed by the contractors at Suez, and the "Junna" was ready to leave that port again at the commencement of the second season, on the day appointed in the programme.	Nil	Expense of refits not known.
Cost of Working the Troop Ships, and Victualling, &c., the Troops.						
29. Total Value of Stores expended on Hull, Engines, &c., for the Season.	4,656	4,491	5,517 (See Remarks.)	4,265 (See Remarks.)	4,075 (See Remarks.)	These sums are partly actual and partly estimated, the accounts from India for a portion of the season only having been received. (See Note against Cost of Coals.)
30. Cost of Coals consumed during the Season.	7,922	7,786	23,300	27,900	21,800	The cost of coals consumed, as well as that of naval stores expended, was increased, owing to two of the ships having proceeded to <i>Calcutta</i> , in order to meet the special requirements of the Military Department.

31. Cost of Victualling Troops, including Messing.	11,083	11,647	13,590	13,338	12,231	This expenditure, as regards the messing of the officers and their families, is <i>approximate only</i>, comprising, in the case of the families, the difference between the computed gross cost of messing and the contributions received under the terms of the Royal Passage Warrant. As regards troops, the cost is estimated, a rate per head being taken, founded on the experience of cost in Her Majesty's troop ships generally, and due allowance being made for the charges of freight, lighterage, &c., and for losses by climate in India.
	2,826	2,664	2,466	2,264	2,280	
32. Bedding for Troops, Women, &c.						This is <i>estimated</i> to be the expense incurred for wear and tear of bedding and for washing during the season.
33. Cost of Victualling Ship's Company, including Messing.	2,752	2,631	5,565	5,481	4,811	In the case of the "Serapis" and "Crocodile," the amounts specified represent three-fifths of the total charge for the year ending 31st March 1868, the proportion to be borne by Indian Revenues, in accordance with the agreement between the Imperial Government and the Secretary of State for India in Council. In future years the expense will be greater, for these ships, in consequence of the <i>full</i> complements having been employed for a <i>portion</i> only of the year 1867-68; but the cost may always be expected to fall considerably short of that for the three ships on the Indian side of the Isthmus, owing to the necessarily increased cost of victualling on that station. The cost of messing the officers, herein included, is <i>approximate only</i>. The expense of victualling the seamen is computed at a rate per head, founded on the experience of the Navy in general, and due regard being had, as above, to the cost of freight, &c., and to losses by climate. (<i>See</i> No. 31.)
	5,589	5,003	8,913	8,024	7,635	
34. Total Amount of Officers' and Men's Pay, including any Allowances.						In the case of the "Serapis" and "Crocodile," the expense inserted represents three-fifths of the total payments in the year ending 31st March 1868; in that of the three other ships, the <i>approximate</i> amount of pay for the period of the season.
TOTAL WORKING EXPENSES - - £.	34,833	34,222	59,351	61,272	52,832	

Note.—Small miscellaneous charges of the troop ships have not been shown distinct hereon, but are merged in Contingencies of the Service, at page 8.

Return of Cost, Tonnage, Power, and Consumption of Coals of the Transports (Troop Ships) "Serapis," "Malabar," "Crocodile," "Junna," and "Euphrates"; &c.—continued.

PARTICULARS REQUIRED.		AMOUNTS.		REMARKS.
		£.	s. d.	
CAPITAL CHARGES of the Service in addition to Cost of Construction of the Troop Ships.				
35.	Cost of Construction of two Steam Tugs, eight Troop Boats, and two Boats for Transport Officers, for use at Alexandria and Suez, including Supervision, Supply of Stores, &c.	15,500	-	
36.	Cost of Purchase, and Laying Down, of Moorings at Alexandria and Suez	4,850	-	
37.	Cost of Construction of Suez Hospital and Equipment with Army Medical Stores, &c.	45,000	-	
38.	Miscellaneous Charges connected with the formation of the Service, including Furniture, &c. for Establishments in Egypt, Salaries of Establishments prior to the Year 1867-68, &c.	7,000	-	
TOTAL		72,350	-	
MISCELLANEOUS CHARGES of the Overland Troop Service incurred in the Year 1867-68.				
39.	Railway Transit Charges for Troops in Egypt during the Season	22,900	-	
40.	Wages, Coals, &c., for Tugs and Boats in Egypt	2,300	-	
41.	Expense of Establishments at Admiralty, in Egypt, &c., for the Year ending 30th April 1868	10,905	-	
42.	Travelling Expenses of Officers, Books and Stationery, Pilotage, Telegraphic Communications, and other Contingencies.	5,000	-	
TOTAL		41,105	-	
43. Estimated Gross Cost of Service to and from India per head for each Class, calculated on the Total Numbers of Troops (Indian Reliefs) Conveyed during the Season, 1867-68				
Officers	-	90	5 4	
*Ladies	-	71	18 5	
*Children	-	29	2 3	
*Female Servants	-	35	19 3	
Second Class Passengers	-	45	2 9	
Ditto - Children	-	29	17 9	
Staff Sergeants	-	17	11 3	
Wives	-	16	11 3	
Children	-	9	15 6	
Troops	-	14	8 4	
Wives	-	13	8 4	
Children	-	8	3 11½	
Equivalent to 19 <i>l.</i> - <i>s.</i> 3 <i>d.</i> per adult. See note against No. 37.				

Equivalent to 19 £. -s. 3d. per adult. See note against No. 37.

* The rates in these three cases represent the cost to Government after allowing for the contributions received under the Royal Passage Warrant.

ABSTRACT OF COST.

PARTICULARS REQUIRED.	SERAPIS.	CROCODILE.	EUPHRATES.	JUMNA.	MALABAR.	SHIPS OR SERVICE GENERALLY.	TOTAL.	REMARKS.
"CAPITAL" CHARGES.								
Construction and Equipment of the Troop Ships -	£.	£.	£.	£.	£.	£.	£.	
Additional Expenses relating to the Troop Ships	204,193	203,292	209,257	210,395	209,125	-	1,036,262	
Construction of Tugs, &c., for Egypt; Moorings for Egypt; Construction, &c., of Suez Hospital, and Miscellaneous Charges.	900	850	15,600	17,400	17,300	-	52,050	
	-	-	-	-	-	72,350	72,350	See note against No. 37.
TOTAL "CAPITAL" CHARGES - - - £.	205,093	204,142	224,857	227,795	226,425	72,350	1,160,662	
WORKING EXPENSES OF THE SERVICE.								
Expenses of the Troop Ships, and Victualling, &c., of the Troops.	34,833	34,222	59,351	61,272	52,832	-	242,510	
Miscellaneous Charges - - - -	-	-	-	-	-	41,105	41,105	
TOTAL WORKING EXPENSES - - - £.	34,833	34,222	59,351	61,272	52,832	41,105	283,615	
Add,—Four per Cent. on Capital Cost, towards replacement of First Outlay.	-	-	-	-	-	40,426	-	
Less,—Contributions payable by Naval Funds on account of the "Serapis" and "Crocodile."	-	-	-	-	-	6,507	39,919	
							323,534	

ESTIMATED Cost for working the Troop Season of 1867-68 - - - £.

Admiralty, }
24 November 1868.W. R. Meade,
Director of Transport Services, Admiralty.C. J. Cruttenden,
Assistant for India.

NAVY (TRANSPORTS).

RETURN of Cost, Tonnage, Power, and Consumption of Coal of the TRANSPORTS "SERAPIS," "MALABAR," "CROCODILE," "JUMNA," and "EUPHRATES;" showing, also, the Expense of conducting the Service in conveying the INDIAN RELIEFS, to and from *India*, during the past Season.

(*Mr. Graves.*)

*Ordered, by The House of Commons, to be Printed,
27 July 1868.*

NAVY (TURRET SHIPS).

RETURN to an Order of the Honourable The House of Commons,
dated 29 July 1868 ;—for,

COPY “of OPINIONS of NAVAL OFFICERS upon the Merits or otherwise of
the TURRET SHIP as a SEA-GOING SHIP.”

Admiralty, }
29 July 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

— No. 1. —

COPY of LETTER from Captain *Brandreth* to several Captains.

Dear —

You know that there is going to be a debate in the House about the turret question, on Mr. Samuda's motion to substitute two turret ships instead of two broadside ships building, without waiting to try the “Captain” or “Monarch” at sea.

Mr. Corry would like to have all the information he can on the subject, and will be glad if you will write your opinion on the question, with reasons for or against the turret as a sea-going ship.

As it is not a party question, but one of getting the best description of ship for the country, without allowing it to be led away by prejudiced opinion, Mr. Corry would like to refer to your opinion if necessary, but would not do so if you have any objection.

Captain , R.N.

Yours, &c.
(signed) *T. Brandreth*,
Captain, R.N.

— No. 2. —

Captain *W. C. Chamberlain* to Captain *Brandreth*.

Dear Captain Brandreth,

Portsmouth, 20 May 1868.

I AM one of those who for years have been anxious to see a real hearty attempt made to succeed in obtaining a seaworthy turret ship, because I believe that such success is possible, and that such a vessel would, at least under ordinary circumstances of warfare, be much more formidable than one of similar tonnage on the broadside principle.

I was present on board the “*Bellerophon*” the day she fired into the “*Royal Sovereign*,” and I was forcibly struck by the fact that frequently the “*Bellerophon*” could have got *no gun* to bear upon the “*Royal Sovereign*” *anywhere*, whilst there was not a moment, so far as I could see (with the exception of that when the “*Bellerophon*” was right ahead or right astern), that the “*Royal Sovereign*” could not have brought *all* her guns to bear at choice upon any spot on the “*Bellerophon*” which was in sight. It appeared to me then, and the conviction remains on my mind, that the “*Royal Sovereign*” is by far the most formidable machine of the two ; and I believe that if real good-will was set to work to produce the best of sea-going turret ships, the result would be such a ship as nothing now floating would dare to encounter.

It is true that much money and many years might be spent before the comfort of broadside ships could be attained, but where there is a will there is a way, and

contrivances would I think soon crop up to conquer difficulties, and render these novel ships both habitable and healthy.

Thus you will see that I am in favour of proceeding with turret ships; though it might not at all follow the particular vessels Mr. Samuda alludes to would reach the excellence I believe experience alone will prove to be obtainable.

I may add, that should my anticipations as to the possibility of building "seaworthy" turret ships prove unsound, such vessels could hardly fail to be of great value for coast defence, and would for that purpose alone be worth constructing without delay.

My opinion is unreservedly at Mr. Corry's disposition.

I am, &c.

Captain T. Brandreth, R.N. (signed) William C. Chamberlain,
Captain, R.N.

— No. 3. —

Captain Vansittart to Captain Brandreth.

H.M.S. "Achilles," Portland,
22 May 1868.

Dear Brandreth,

I AM an advocate for turrets, and believing that guns will, in the long run, beat armour, would build them capable of carrying heavier metal than we now think of: 12 and 18-ton guns could then be replaced by the monster guns of future days. I would commence turret vessels *forthwith*, and if the earlier ones failed to meet all the requirements of long cruising, foreign stationed sea-going ships, the money would not be wasted, inasmuch as a home force capable of resisting any troublesome naval power, or all foreign navies together, would give confidence to the Government and people, and enable "John Bull" to defy all enemies.

I do not suppose your note calls for minute details, or opinions unsupported by practical experience, but refer to one constructive fact; how rigid soever a deck may be made *over* the turrets for the purpose of affording standing or working space, it will be found to fail: I gather this from the effect of the firing on board "Prince Albert," on even a narrow slip of deck which runs along amid-ship. Should it be found possible or convenient to carry such a deck to a much greater height above the turrets, I suppose the concussion would be less felt.

Yours, &c.

(signed) E. W. Vansittart.

— No. 4. —

From Captain Hood, Her Majesty's Ship "Excellent."

23 May 1868.

I CONSIDER that sea-going iron clad ships should (to be efficient) possess the following qualifications:—

1. Be thoroughly fit to cruise as an ocean squadron, or perform a voyage to any part of the world under sail with but little assistance from their steam power; have a sufficient height of freeboard, and standing bulwarks sufficiently high and strong to protect the crew from the sea in bad weather; also good accommodation for officers and men, and plenty of room on the upper deck to enable the ropes, sails, &c. to be properly worked, and boats and spare spars stowed.

2. Have a fairly steady platform, or, in other words, should not roll in moderate weather sufficiently to interfere with working the guns or delivering fire with precision; be able to deliver a fire from heavy guns right ahead, right astern, on either bow or quarter, and be ready for action with the least possible delay at all times. I will now with regard to the above-mentioned qualifications compare an iron clad ship armed on the broadside principle with a turret ship.

To enable a ship to be an efficient ocean cruiser, and to proceed to any part of the world under sail without much use of her steam power, it is evident that she must possess a very considerable amount of sail power, and consequently large masts and yards; a ship armed on the broadside principle has a large clear upper deck with plenty of room for the crew to work the ropes, sails, &c., and this deck,

from

from its height above the water, and strong bulwarks, affords in bad weather good protection from the sea.

A turret ship proper has a low freeboard, and cannot possibly have strong standing bulwarks, as in action they must always be let down in order to be out of the way of the fire from the turrets. The consequence of this low freeboard is, that even in moderate weather the upper deck would be continually washed over by the sea, and in anything like bad weather it would be impossible for the crew to work the ropes, sails, &c., on this deck; and I believe that a moderately heavy sea would smash the moveable iron bulwarks, thus leaving the upper deck without the slightest protection from the sea, except at the bow and stern; it is therefore absolutely necessary in sea-going turret ships to construct a spar deck above the turrets, on which the men can work the ropes, sails, &c.; this spar deck must necessarily be of less width than the turrets, otherwise it could not stand the concussion of heavy charges fired underneath it, and consequently the space on such a spar deck must be very much less in a turret ship than in a much smaller vessel armed on the broadside; and in my opinion a large clear upper deck on which the crew can work the ropes, &c., in bad weather (well protected from the sea) is a point of the greatest importance in an ocean iron clad ship.

From the great space taken up by the turrets it is necessary to provide extra accommodation for the officers and crew; this is usually done in turret ships by building a forecastle and poop on the upper deck. The forecastle is also of the greatest assistance in preventing the sea from continually washing over the bows, as it otherwise would when steaming head to wind even in moderate weather, and also in working the anchor gear. Without such a protection it would be almost impossible for men to stand and work forward whilst stowing the anchors in anything like a sea. This addition of a forecastle and poop, although of great use for the reasons I have mentioned, wholly prevents the fire from being delivered either right ahead or astern, and this is a very serious defect, as in the event of a turret ship chasing or being chased by a vessel armed on the broadside principle, she could not fire at the enemy without yawing.

A ship properly armed on the broadside principle has, in addition to the delivery of a heavy independent or converging fire from her broadside guns, the power of delivering a heavy fire either ahead, astern, or on either bow or quarter. For instance, a ship of the "Audacious" class will, in addition to her heavy broadside fire from the main deck battery, be able at the same time to fire two 12-ton guns ahead, and also two 12-ton guns astern from her upper deck, which is a most important point in action. Also from the height of these guns on the upper deck out of the water, they would in tolerably close action be able to fire on the unprotected decks of a turret ship, and also sweep the tops of the turrets with case shot, which in my opinion would have the greatest effect in keeping down the fire. The efficiency of firing from turrets depends wholly on the accuracy of aim taken by the captain of the turret, who whilst aiming is obliged to have his head and shoulders above the top of the turret; he is in a measure protected by an iron projection round the hole through which the head passes; but I have as yet seen no really efficient fitment for protecting him from the fire of riflemen in the tops of an enemy's vessel, still less from the fire of case from the upper deck guns of one of the "Audacious" class; in fact, if the captain of the turret were thoroughly protected whilst aiming, his range of vision would be very materially curtailed, and the rapidity of aiming consequently diminished, so long as the aiming is carried on by the present plan through the top of the turret. I have a firm opinion that in tolerably close action the fire of case from guns on the upper decks of vessels like the "Audacious," and also from riflemen in the tops on the top of the turrets, will have a very great effect in keeping down the fire.

It is probable that a turret ship will, from her low freeboard and central weights, roll in bad weather considerably less than a ship armed on the broadside, and thus afford a steadier platform for the guns; but this lowness of freeboard and total absence of bulwarks would frequently cause the sea to enter the ports of turrets, and thus impede loading.

Rapidity in clearing for action is an important point in sea-going ironclads. I feel satisfied that a ship armed on the broadside, especially a box-ship (where the battery is kept entirely clear and separate from the men's mess and sleeping place), can be cleared for action much quicker than any sea-going turret ship, especially at night. In the former the guns only have to be cleared away, loaded, and the ship is ready; in the turret ship the whole of the moveable bul-

works have to be let down, and everything on the upper deck which interferes with the fire from the turrets removed before opening fire. Unless a sea-going turret ship has tripod masts (which are at present quite an experiment) her rigging must interfere most materially with her fire; and even should it be found that tripod masts are a success as far as sea-going ships are concerned, they must to a certain extent interfere with the fire from the turrets, although to a very much less degree than the rigging. Again, in the confusion and hurry of close action at night, there is the possibility of one turret firing into the other, or shooting the tripod masts away. No efficient plan has, up to the present, been adopted to prevent this, and it is an eventuality which might occur, and prove most serious in its consequences.

There is no doubt that heavier guns can be carried in turrets than on the broadside; also, that the men in turrets (with the exception of that most important captain of the turret) are certainly better protected from the effects of shot and shell than in a broadside ship; but in my opinion guns of 12 or 14 tons can be perfectly controlled, and worked with rapidity, in ships armed on the broadside principle in any moderate weather, when it is probable that an action would take place; and I consider these guns are quite heavy enough to be carried in any sea-going ship, the protection given to the men working broadside guns when the armour plating is six inches thick with a good backing, is, in my opinion, quite sufficient; although, as I said before, not equal to what can be obtained in a turret, both on account of the greater thickness of armour which can be placed on a turret, and also its shape, which decreases very considerably the chance of direct hits from shot or shell.

For the above-mentioned reasons I am of opinion that, with regard to sea-going ironclads, ships armed properly on the broadside are most decidedly to be preferred to turret ships; but for coast defence, when the advantages of the turret system can be developed to their fullest extent, by means of low freeboard, no masts, and nothing to interfere with the fire from the turrets in every direction, I consider that turret ships are by far the most formidable class of vessel.

(signed) *A. W. A. Hood*, Captain,
H.M. Gunner Ship "Excellent."

— No. 5. —

Captain *George Willes* to Captain *Brandreth*.

My dear Brandreth,

20 May 1868.

I HOLD very strong opinions about sea-going turret ships, and I have not the slightest objection to Mr. Corry making use of my name.

I think the Admiralty quite right in not substituting "two turret ships for the broadside ones in the building programme," until the "Captain" and "Monarch" have been properly tried *at sea*.

Every day proves how unwise it is to embark so largely in any one new scheme. At this moment we see that public opinion forced us to adopt largely the twin screw, which we shall much regret. I object to a sea-going turret, because directly you make one you lose the great advantage of the system, *i. e.*, an all-round fire. I object to any ship being sent to sea with such few guns.

The Dutch turret ship was here a short time since, when I closely inspected her; to make her habitable a large poop and forecastle was necessary; so that with these decks and tripod masts, really the points of the circle on which the guns would bear are very small.

The Dutch captain, on my raising this objection, answered, "But with the twin screws I can point the ship." This is an entire fallacy, as in the "Penelope" we have found (she is only 260 feet in length) that the screws will not turn the ship at all (pivoting), except in a light wind, and then very unsteadily.

When the turret system was first started it was considered the only means of working heavy guns, but now we have 12-ton guns on the broadside worked with as much ease as a 32-pounder formerly, and I see no limit to the size of the broadside gun, as there is certainly not to the strength of the ship, nor is there to the number of the guns.

Therefore,

Therefore, in a ship like the "Lord Warden," we can have any sized guns, any number of them, a right ahead and a right astern fire, a plunging fire, and a crushing fire.

We are all forgetting the last point; only conceive a broadside of 15 well-directed 9-inch shot, striking a "Royal Sovereign"!

At the Nile we had Sir James Saumarez's ship firing *one* broadside at a French frigate and sinking her; and finally, in the "Lord Warden," we have a fine, airy, roomy, habitable ship, well-ventilated, plenty of light, for we must remember the animal; to maintain a fine race, which Englishmen I hope always will be. The above are necessities, then, in your broadside ship; you are ensured a force which the turret ships would not have; this is most important on our distant stations.

In the "Ocean," in China, we have a body of men to land and protect our people; to man ships, which would be brought out there in case of war.

After having said all this against sea-going turrets, I beg that it may be most distinctly understood that, in my opinion, a turret vessel proper—the "Royal Sovereign"—has all the elements necessary for "harbour and coast defence." It always struck me that in the panic of 1860, there was at hand the very means of creating an enormous defensive power at *comparatively* small cost.

It is to be hoped that even now the country will see the utter folly of these ridiculous and stupid forts, and spend a part of the money which must be spent in arming them, by converting every sound line-of-battle ship in our ports into "Royal Sovereigns"; then, when the occasion arises, a few seamen, stokers, and marines embarked on board each would enable us to show a second line of defence which would astonish Europe.

I have not adverted to one of the points raised in the case, "Turret" *v.* "Broadside," that is, the steadiness of the platform, because, as the "Achilles" rolls less than any other ship, and the "Bellerophon" is fairly steady, it shows the rolling of "Lord Warden" and others is due to form or distribution of weights, and has nothing to do with the broadside ship.

Captain Brandreth, R. N.

Believe me, &c.
(signed) *George Willes.*

— No. 6. —

Captain *King Hall* to Captain *Brandreth*.

REMARKS upon Turret Ships of War.

THE turret system I consider perfect for coast and harbour defence, both for our own shores, colonial and foreign possessions, and the importance of having one or two of moderate size; light draft, and from the condition of very high speed not being required, comparatively inexpensive turret ships at each of our mercantile ports, ready to protect the free entrance to the port, and which could be manned readily on the spot, cannot, in my opinion, be over-rated; and being able to concentrate in large numbers, on any point of attack, would be a most formidable force. The details for their being manned and maintained might be most simple.

Low freeboard, and, ordinarily speaking, a steady platform for their guns, from the waters they would usually navigate in, would be obtained. But seaworthiness, in its comprehensive meaning (namely, for sea-cruising and long voyages), with a low free board, which is a steady platform, which is the condition the turret system aims to arrive at, would not be looked for, nor do I think ever has, or can be attained.

I take the liberty of writing frankly to you, because I deem it a public duty, and sincerely trust that no pressure of irresponsible opinion will tempt the Board of Admiralty to order other sea-going turret ships to be built, until the "Monarch" and "Captain" have been fairly and honestly tried, their defects discovered, and improvements suggested.

I consider a sea-going turret ship should be able to proceed alone, with dispatch to any part of the world, at any season of the year, fulfilling all the conditions of a ship of war, and among them the comfort and proper accommodation

tion for the crew; and because the "Miantonomah," "Monadnock," under convoy, have made sea passages, and others have gone to various parts of the world, it manifests simply that they are able to make the passage, as the "Raft" did which crossed the Atlantic last year, or as they report the "Red, White, and Blue" did, or the "Rob Roy Canoe" does every season, without regard to time occupied in the passage, which just makes the difference.

A turret ship with low freeboard or no freeboard, is perfect for harbour, where she remains perfectly upright. But that condition alone at sea would be her weakness, for when blowing hard the ports would not be opened unless with great risk.

And if the enemy possessed superior speed, and obtained the weather-gage with the turret to leeward of him, it would be a source of great danger attempting to fight the guns, from the certainty of the sea entering.

True, there is not much rolling, but with an angle of five or six degrees only, the deck would be exposed, and especially that part at the base of the funnel casing, which would be an admirable target, and the point where I should direct my fire, and not at the turret plated with 12 inches of iron, knowing that one or two shots or shells thrown in there would destroy the steam power. I would also remark that the possibility of a shot or shell going over and bursting in the top of the turret when rolling, appears never to be taken into account; but the assumption that the sides of the turret will always receive the fire. To exemplify my meaning, if you will consider your hat a turret, and allow a friend to throw marbles at it, the sides will be struck; but give it a rolling motion of five or six degrees only, and the marbles aimed at the upper part will pitch over the rim, and when this took place the destruction may be readily conceived.

With a low freeboard, the hull of the ship being reduced in consequence, I cannot conceive in what way coals and provisions for a long passage can be carried; and this demands the power of her being handy under canvas.

Rear Admiral Yelverton reports in November 1866: "The 'Wivern' (which represents the low freeboard) on reaching the cruising ground she was even short of coals, and I was obliged to send her to Bantry to fill up; but the experience I had of her performance up to that time convinced me of her unfitness to keep the sea. The 'Wivern' does little under sail, and is totally unfit for the duties of a sea-going vessel; but she is well adapted for coast defences."

These matters should be decided and dealt with in a practical manner, and what may appear to be perfect in diagram and points of ingenious speculation, should be proved by absolute certainties, before such conclusions are arrived at.

On the "Miantonomah" leaving this port with a moderate breeze from the eastward, I accompanied her to the Nore; she was hermetically sealed forward, and her deck was wet to the after turret.

True, the crew could enjoy the fresh air under the canopy of heaven on a bridge between the turrets in daylight, or they might get it below by the aid of several ventilating fans worked by steam in utter darkness; but I do not call this comfortable or suitable for making a voyage.

(signed) W. King Hall,
Captain Superintendent.

Sheerness Dockyard,
22 May 1868.

— No. 7. —

From Rear Admiral A. P. Ryder to Mr. Corry.

H.M.S. "Bellerophon," Atlantic,
14 June 1868.

Dear Sir,

THE statements which have been made in the newspapers and in the House of Commons regarding the "Bellerophon" during her commission, have been calculated to prejudice any one against her.

I was most agreeably surprised, therefore, to find that she not only had made good a speed of 13·8 knots on her late six hours' trial, but is a remarkably steady ship, as the recorded angles of the squadron will show. She is also a very handy ship under steam alone, and for her small sail power a very handy ship under sail alone.

This

This comparative handiness, when she is compared with the long ships "Minotaur" (400 feet) and "Achilles" (380 feet), "Bellerophon" (being only 300 feet) is no doubt due partly to her comparative shortness, and partly to her balanced rudder with its large surface. The "Bellerophon's" magnificent battery of ten 12-ton guns, protected, as is also the case with three-fourths of the water-line by 6-inch plates (only one-fourth of the belt being tapered to a less thickness), makes her, in my opinion, as far as I can judge at present, the most successful plated, sea-going, cruising line of battle ship that I have visited, and, as far as I know, she possesses, taking all difficulties and clashing qualifications into consideration, in a larger degree than any such ship *that has as yet been in active service*, the greatest possible development of the greatest number of the numerous qualities required to make an efficient man of war with *one* exception, namely, *the quantity of coals she can carry in her bunkers*, viz., 600 tons, but restricted at present by Admiralty order to 500 tons. I should here observe that this limited quantity is made the most of by use of the surface condensers and super-heating apparatus, which now works satisfactorily, and in the opinion of the chief engineer effects a saving of 8 per cent., making 600 tons, equivalent to a load of 650 tons.

Reserving my opinion as to the comparative merits of a *sea-going, cruising, cupola* ship until we have one in company (and their continued absence is to be much regretted, as that type would appear to have several special recommendations), and considering only the ships here present, viz., "*Minotaur*," "*Achilles*," "*Warrior*," "*Prince Consort*," "*Defence*," "*Bellerophon*," I have endeavoured to form my own conclusions as to what should be the type to be followed in the designs of any ship that is to be immediately laid down, on the assumption that—

1. At least ten 12-ton guns are to be on the main deck.
2. That these guns are to be protected all round by 6-inch plates, either as in the "*Minotaur*," type of plates extended over the whole length of the ship, or as in "*Bellerophon*," in what has been called the "box" type.
3. That there is to be a belt which for three-fourths of the ship's length shall be six inches thick, and of sufficient height and depth.
4. That the decks are to be composed of steel and wood sufficiently strong to deflect heavy shot.*

After giving this question the closest consideration, I am driven irresistibly to the conclusion that the "*Bellerophon*" is, of all the ships *here present*, the only type to be followed; and in saying this, I purposely throw aside all consideration of her comparative economy in *first cost*, as a question with which naval officers *afloat*, when giving their opinion as to the relative merit of various types, have nothing to do, and which, if they consider at all, will probably render their professional opinion valueless.

I regret very much that the "*Bellerophon*" cannot carry the 700 tons of fuel which is carried by longer ships, and which, if they were fitted with surface condensers, &c., as she is, would be equivalent to about 760 tons. If by any re-arrangements below, and any slight increase in dimensions which would not affect materially her admirable qualities, room could be found, and displacement provided, for that 700 tons, nothing would be left to be desired in this respect.

The 12-ton guns are in the "*Bellerophon*" only 16 feet from centre of gun to centre of gun. In building any other ships of this class, more room should be provided, viz., at least 18 feet, by extending the battery both ways; this would involve an addition to the weights due to the extra plating.

The foremost and the after gun on each side of the battery should be enabled, as in "*Pallas*," to fire as nearly fore and aft as possible, if that method of obtaining a nearly fore and aft fire is found to be satisfactory.

There should be *two guns*, or one at least, on the fore-castle. The only guns that can be used as chase guns now are on the main deck behind the bow breast plate; when chasing at full speed (13·8 knots) it might be difficult to use them, or to command a view over the *bow wave*, either from them or from the foremost main deck battery guns, even if these latter could be trained nearly in

* I am not aware that the resistance to heavy shot of a horizontal target built to represent a deck has ever been sufficiently tested; if not, such experiments should be tried.

in a fore and aft direction, as in "Pallas." The *sail power* might, I think, be increased with advantage in any ships of the "Bellerophon" type that may be built.

I am, of course, aware that the "Hercules," now nearly finished, is to carry heavier guns, and to have thicker plates than the "Bellerophon;" but, as I said before, I have endeavoured to ignore the existence of all other types, whether as regards *ships, guns, or plates*, than those here present, and have merely endeavoured from the facts before me to arrive at some conclusion:

1. As to whether any one or more of these ships presents a good type of vessel to meet certain assumed requirements (*viz.*, those already given, four in number); and if so,
2. Whether any one of these vessels shows any decided superiority over the others in respect of the four requirements; and if so, then—
3. Whether she presents a model in which any, and if any what, improvements suggest themselves; or if she appears to be relatively and absolutely perfect.

The "Bellerophon," in my opinion, shows a decided superiority over any other ship here present in respect of the *four requirements*, and I have already indicated the direction in which certain improvements may, I think, be made.

In obedience to Admiral Warden's instructions given before we left Portland, I am preparing a more detailed report upon many of the points briefly touched upon above, but I have thought that you might like to know my opinion of "Bellerophon," as far as I have had an opportunity of judging.

I am well aware how soon a naval officer becomes prejudiced in favour of the ship that carries him; I have endeavoured to fortify myself against such prejudices, and perhaps an *early* formed opinion is less likely to be warped than one formed later.

I have not, as yet, seen the "Bellerophon" in bad weather, or in a heavy sea; but we have experienced the long Atlantic swell so provocative of rolling, and in which our future naval actions may often have to be fought.

I will give you one sample of the number of degrees rolled through in a minute, which is the real measure of steadiness.

$\left\{ \begin{array}{l} \text{"Minotaur"} \\ \text{"Achilles"} \\ \text{"Warrior"} \\ \text{"Bellerophon"} \end{array} \right.$	$\begin{array}{rcl} - & 4.4 \times 1 & = 4.4 \\ - & 6 \times 2 & = 12 \\ - & 5 \times 2.5 & = 12.5 \\ - & 11 \times 1.6 & = 17.6 \end{array}$	$\left\{ \begin{array}{l} \text{"Prince Consort"} \\ \text{"Defence"} \\ \text{"Royal Oak"} \end{array} \right.$	$\begin{array}{rcl} - & 6 \times 4 & = 24 \\ - & 5 \times 6.5 & = 32 \\ - & 15 \times 7.4 & = 111 \end{array}$
---	---	--	--

The four first ships were quite steady enough for action; a certain amount of motion is much preferred by all good gunners. I prefer for action at sea, as distinguished from an engagement with forts, a ship with "Bellerophon's" motion to the steadiness of the "Minotaur."

I have not as yet been allowed any opportunity (and have not asked for it) of seeing the "Bellerophon" at full speed, and have not therefore as yet made the acquaintance of her famous bow wave, but I hope to do so before I return to England. The opinion of Captain Macdonald is, that when the ship is being driven head to sea, this wave which precedes the "Bellerophon," at exactly her velocity, will be advantageous in preventing the ordinary sea from breaking on her fore-castle and in overcoming its resistance. This as yet is a speculation; but on the only occasion when she was forced against a head sea, *viz.*, on a previous cruise, she was considered by Captain Macdonald to have exhibited comparatively with the other ships a remarkable economy of fuel.

The *bow wave* does not, I am informed, show itself until the speed has reached over nine knots, and then rises gradually to eight feet, when the speed has reached its maximum of nearly 14 knots. Its presence doubtless occasions in smooth water an extra expenditure of fuel, but it has occurred to me,—

1. That when the "Bellerophon" attempts to ram an enemy's ship, that if it is thought safe to get up her speed to 10 knots, and maintain it until the blow is given, or until shortly before it is given, that the wave preceding the ship, but close in front of the bows, will act as a shield, and deflect upwards many shot which would otherwise have struck her; and,—

2. That the wave will, when it first catches the enemy's ship, list her over, and raise the lower edge of her plating, so that the "Bellerophon's" "eperon" would enter at once *underneath* the strong part of the enemy's side and penetrate further than if it first struck the thick plates, backing, &c., and with less injury to the "Bellerophon." This, if worthy of consideration, should lead to any future eperons being made especially strong on their upper sides, as when the wave subsided,

subsided, which it would instantly do, the weight pressing downwards on the eperon would be enormous. I have not seen these possible advantages of this peculiar form of stem alluded to in print, and therefore mention them for your consideration.

The prolongation of the stem interferes very much with the rapid working of the anchors and cables, and the want of a steam capstan, such as that supplied to the "Minotaur" and "Achilles," is much felt, and they should be fitted to all ships with prolonged stems—the "Audacious" type. The height of the lower portsill of the battery guns of the "Bellerophon" above the water is eight feet nine inches (with 400 tons of coal). The height in the battery is considerable, seven feet six inches between the beams. The object of placing in the "Audacious" type two heavy guns on each side of the upper deck, partially protected by plating, is, I have been informed, to secure the services of such guns in heavy weather, when it is assumed that the height of the "Bellerophon's" portsills, eight feet nine inches, would not be sufficient to enable the main-deck guns to be fought.

I beg to submit that in any future design for ships of this class the floor of the battery might be raised at least nine inches, still leaving six feet nine inches as the height inside the battery, and that as the guns will always be fought parallel to the deck at sea, 12 inches of the lower part of the port might be filled up by a moveable lower half port, which would practically add that much to the height of the lower portsills above the water.

This, together with the nine inches added to the height of the floor of the battery, would raise the lower portsill by one foot nine inches, or to ten feet six inches. The "Bellerophon" type is so very steady, as regards rapidity of motion, and so very steady as regards the angle of extreme inclination, that if the above changes are made, the necessity of this special and, in some respects, objectionable feature (the two guns) in the proposed "Audacious" class may perhaps be avoided.

The "Bellerophon's" handiness under steam, arising from the combined effects of comparative shortness, and the large-surfaced balanced rudder, is so invaluable a quality that I have not recommended any material increase in her length, although the great importance of that 700 tons of fuel weighs much with me.

I obtained from Paris, just before starting, the most recent book published by French naval officers on tactics, rolling, &c., and have been much impressed with the evident intention of the French navy to trust their fate in the next naval war with us almost entirely to "ramming," and we must be prepared for this method of attack, for which their new evolutions by pelotons are specially designed.

In order to ram with the greatest chance of attainable handiness is all essential. To secure the utmost attainable handiness, great length of body must be avoided. We also secure in the shorter ship that she will be more easily missed by the enemy when attempting to ram, while the longer ship not only turns to avoid or diminish the force of a blow with greater difficulty, but opposes a wider and less easily missed mark to ram at.

All the good qualities of the "Bellerophon" are well developed by Captain R. Macdonald, who thoroughly understands her, manœuvres her in a thoroughly seamanlike manner, and nothing is left to be desired upon this head. In conclusion, Sir, I beg that it may be understood that some of my opinions may be modified before the cruise is ended.

(signed) *Alfred P. Ryder,*
Rear Admiral.

— No. 8. —

Rear Admiral Yelverton to Mr. Corry.

My dear Mr. Corry,

9, William-street, Lowndes-square,
20 May 1868.

In answering your letter, pray believe me, I am wholly uninfluenced by inventors or builders, and what I venture to say is from a practical and professional point of view, and the result of close and careful attention to the development of our iron-clad navy.

It is said, and with much truth, that the turret system has not met with the encouragement it deserves; and I, for one, regret we have not a number of such

vessels for coast defence. But where is the evidence that a *sea-going* turret ship has been tried?

All things considered, I am clearly of opinion that the two turret ships, "Captain" and "Monarch," ought to be fairly tested as *sea-going* ships before we venture on building other vessels of the sort.

When the numerous advantages of the turret system are found to be compatible with the many and varied requirements of a *sea-going ship in all weathers*, it will be time to depart from what I hear you now intend doing.

Pray believe me, &c.

(signed) *H. R. Yelverton.*

— No. 9. —

Captain *Reginald J. J. G. Macdonald* to Mr. Corry.

H. M. S. "Bellerophon,"

21 February 1868.

Dear Mr. Corry,

I HEAR various reports that this ship is a bad roller in a seaway. This I can, with the greatest confidence, contradict. I consider her a remarkably steady ship, so much so as quite to surprise me, after the "Arethusa" and other vessels I have served in.

When she does roll, which in all Atlantic swells must be the case, she goes so easy as rarely to upset furniture, &c., or to render it necessary to secure such.

Coming home from Lisbon, in December, with a heavy westerly swell, we undoubtedly rolled heavily, heavier than I ever saw her; but we were quite light, out of coals, provisions, and water.

The "Achilles" is certainly steadier; but the difference between us and the "Warrior," "Lord Clyde," and "Lord Warden," is remarkable.

I mentioned this to Mr. Reed, the other day, and he thought you might like to have my opinion *direct* on this subject.

Yours, &c.

(signed) *R. J. J. G. Macdonald,*
Captain.

— No. 10. —

Rear Admiral *Frederick Warden* to Mr. Corry.

My dear Mr. Corry,

Portland, 20 May 1868.

As regards my opinion of turret ships, although no such ships have ever yet been built for our service, which would be suitable for cruisers, or perhaps be pronounced habitable, yet I have not the least doubt in the world that they may be constructed to meet both requirements.

It may, indeed, be quite open to doubt whether it is wise at the present moment to commence building two more turret ships, when there are two so near completion, and which will be soon on their trial; but if they were recognised and acknowledged as a part of our system, I do not think one-third of such ships would be out of proportion in the number of iron-clad ships to be built in the future.

Believe me, &c.

(signed) *Frederick Warden.*

— No. 11. —

Captain the Honourable *F. A. C. Foley* to Captain *Brandreth*.

Dear Captain Brandreth,

H. M. S. "Cambridge," 20 May 1868.

I HAVE much pleasure in being able to place my opinion before you for the information of Mr. Corry, with regard to what I think of turret ships, and whether it would be advisable to build two turret ships in lieu of two broadside ships during this year.

I think

I think it would be extreme folly to do so, until such time as the "Captain" and "Monarch," now building, have had a trial at sea to test their sea-going qualities.

Having had during the last year some experience in the "Prince Albert," I consider the low free-board turret ship as useful in the English navy only to protect the port to which she belongs as a coast defence, and not as a trustworthy sea-going ship, from the fact that in rough weather the sea breaks over the deck, and will cause the turret ship to bar up her port to keep the water out, which would otherwise pour in, besides other reasons which a captain would find out when placed in such a vessel in a heavy sea. For protection of *harbours* they are admirable, and better than forts.

Yours truly,
(signed) *Fitzgerald Foley.*

NAVY (TURRET SHIPS).

COPY of OPINIONS of NAVAL OFFICERS upon
the Merits or otherwise of the Turret Ship
as a Sea-going Ship.

(Admiral Seymour.)

Ordered, by The House of Commons, to be Printed,
31 July 1868.

501.

Under 2 oz.

VESSELS NOT ARMOUR-PLATED.

RETURN to an Order of the Honourable The House of Commons,
dated 14 July 1868 ;—for,

RETURN “ of VESSELS NOT ARMOUR-PLATED, Building, or Ordered to be
Built, during the Year 1868, in the following Form :—

Names.	Where building.	Guns.	Tons.	Lead Displacement.	Horse-power.	Name of Engine Maker.	If Engines are on Improved Ex- pansive Plan and Surface Con- densers.	Estimated Cost of Engines.	Draught of Water.		Length.		Breadth.		Probable Progress during the Year 1868-69.	Probable Time of Launching.	Probable Time of Completion.	Hull—Wood or Iron.	Estimated First Cost of Hull.	Cost of Hull up to 31 March 1868.		Remarks.
									Forward.	Aft.	Between Perpendi- culars.	Of Keel for Tonnage.	Extreme.	For Tonnage.					Labour and Materials.	Incidental and Estab- lishment Charges as enumerated in State- ment prefixed.	Estimated Expenditure on Hull from 1 April 1868 to 31 March 1869.	

Admiralty, }
24 July 1868.

N. HOUGHTON,
Pro Chief Clerk.

(Mr. Laird.)

Ordered, by The House of Commons, to be Printed,
27 July 1868.

RETURN OF VESSELS NOT ARMOUR-PLATED,

NAMES.	Where Building.	Guns.	Tons.	Load Displacement.	Horse-power.	Name of Engine Maker.	If Engines are on Improved Expansive Plan and Surface Condensers.	Estimated Cost of Engines.	Estimated Load Draught of Water.		Length	
									Forward.	Aft.	Between Perpendiculars.	Of Keel for Tonnage.
Inconstant	Pembroke	16	4,066	<i>Tons.</i> 5,554	1,000	Penn	Yes	£ (a) 66,000	<i>Ft. in.</i> 22 0	<i>Ft. in.</i> 24 6	<i>Ft. in.</i> 337 4	<i>Ft. in.</i> 302 2½
Volage	Thames Company, Blackwall.	8	2,322	3,320	600	Penn	Yes	(a) 41,000	18 0	22 0	270 0	247 5½
Active	Thames Company, Blackwall.	8	2,322	3,320	600	Humphrys	Yes	(a) 39,000	18 0	22 0	270 0	247 5½
Juno	Deptford	6	1,462	2,074	400	Humphrys	No	(a) 20,800	(b) 15 8	(b) 17 5½	200 0	171 6½
Thalia	Woolwich	6	1,459	2,155	400	Napier	No	(i) 19,600	16 6	17 6	200 0	171 5½
Blanche	Chatham	6	1,268	1,702	350	Ravenhill	Yes	(a) 22,000	(b) 13 7	(b) 16 7	212 0	185 8½
Dido	Portsmouth	6	1,268	1,699	350	Engines not yet ordered			13 6	16 6	212 0	185 8
Eclipse late Sappho.	Sheerness	6	1,273	1,668	350	Penn	Yes	(a) 23,800	(b) 13 4	(b) 16 5	212 0	185 8
Sirius	Portsmouth	6	1,268	1,699	350	Maudslay	Yes	(a) 22,550	13 6	16 6	212 0	185 8
Spartan	Deptford	6	1,268	1,699	350	Rennie	Yes	(a) 22,500	13 6	16 6	212 0	185 8
Tenedos	Devonport	6	1,268	1,699	350	Engines not yet ordered			13 6	16 6	212 0	185 8
Newport	Pembroke	1	425	490	80	Laird	No	(a) 3,840	(b) 10 8	(b) 11 9	145 0½	127 10½
Briton	Sheerness	10	1,322	1,874	350	Engines not yet ordered			13 9	16 9	220 0	193 6½
Druid	Deptford	10	1,322	1,874	350	Maudslay	Yes	(a) 21,500	13 9	16 9	220 0	193 0
Bittern	Pembroke	3	663	754	160 Double screw	Engines not yet ordered			9 3	10 3	170 0	151 7
Bullfinch	Sheerness	3	664	754	160 Double screw	Rennie	No	(a) 7,840	9 3	10 3	170 0	151 7

(a) Contract price of engines.

(b) This is the actual load draught on completion of the ship for sea.

(c) This is the original contract price, exclusive of any sums subsequently authorised for works additional to the contract, and does not include the cost of Admiralty supervision.

(d) This, besides the payments made to contractors, includes expense for Admiralty supervision.

(e) This is the amount that remains to be paid of the original contract price, together with any sums subsequently authorised for works additional to the contract which remain to be paid, but exclusive of expense for Admiralty supervision.

- BUILDING, OR ORDERED TO BE BUILT, DURING THE YEAR 1868.

Breadth,		Probable Progress during the Year 1868-69.	Probable Time of Launching	Probable Time of Completion or of Delivery by Contractors.	Hull, Wood, or Iron.	Estimated First Cost of Hull.	Cost of Hull up to 31 March 1868.		Estimated Expenditure on Hull, from 1 April 1868 to 31 March 1869.
Extreme.	For Tonnage.						Labour and Materials.	Incidental and Establishment Charges.	
<i>Ft. in.</i>	<i>Ft. in.</i>					£.	£.		£.
50 3½	50 3½	(f) 3¼/8	Nov. 1868	Feb. 1869	Iron, cased with Wood.	160,000	63,345	As the Incidental and Establishment Charges prior to 1866-7 have each year been calculated on a different basis, it would be useless to insert them as so calculated in this Return, and the Report of the Parliamentary Committee on Admiralty Monies and Accounts was not received in sufficient time to admit of their being re-calculated for this Return, in accordance with the recommendations of that Committee.	96,655
42 0	42 0	6¼	Nov. 1868	Feb. 1869	Iron, cased with Wood.	(c) 75,453	(d) 13,641		(e) 62,007
42 0	42 0	5½/8	Jan. 1869	April 1869	Iron, cased with Wood.	(c) 75,453	(d) 13,054		(e) 62,806
40 4½	40 0½	(f) ¼/8	Launched 28 Dec. 1867.	Completed May 1868.	Wood - -	(n) 50,716	49,744		.972
40 4	40 0	3¾/8	Aug. 1869	Nov. 1869	Wood - -	46,696	17,204		19,700
36 0	35 10	—	Launched 17 Aug. 1867.	Completed Feb. 1868.	Wood - -	42,586	42,767		- nil.
36 0	35 10	1½/8	Uncertain -	Uncertain -	Wood - -	42,586	11,727		7,984
36 1	35 11	(f) ¼/8	Launched 14 Nov. 1867.	Completed July 1868.	Wood - -	42,586	37,968		3,143
36 0	35 10	2/8	Launched 24 April 1868.	31 Jan. 1869	Wood - -	42,586	28,099		14,487
36 0	35 10	(g) 5½/8	14 Nov. 1868	March 1869	Wood - -	42,586	9,794		32,792
36 0	35 10	1½/8	Uncertain -	Uncertain -	Wood - -	42,586	8,638		7,984
25 4	25 0	—	Launched 20 July 1867.	Completed March 1868.	Wood - -	15,000	(h) 16,246		- nil.
36 0	35 10	1½/8	Uncertain -	Uncertain -	Wood - -	44,279	- nil -		8,302
36 0	35 10	(g) 6¼/8	13 Mar. 1869	July 1869	Wood - -	44,279	2,484		—
29 0	28 8	(g) 3/8	Oct. 1869	Jan. 1870	Wood - -	23,200	2,964		8,700
29 0½	28 8½	(f) ¼/8	Undocked 13 Feb. 1868.	Completed 18 May 1868.	Wood - -	23,200	17,148		6,052

(f) Less progress was made on this ship last year than was anticipated.

(g) More progress was made on this ship last year than was anticipated.

(h) This vessel was completed after being suspended for some years, which service additional work had to be performed.

(n) This is the estimated cost of fitting engines originally made for the

"Dalhousie," and includes the original value of these engines and the cost of new boilers.

(n) This estimate is made up of the sum actually spent upon the vessel at Deptford, and the amount required to complete her for sea at Woolwich as estimated by the Woolwich officers.

RETURN OF VESSELS NOT ARMOUR PLATED,

NAMES.	Where Building.	Guns.	Tons.	Load Displacement.	Horse-power.	Name of Engine Maker.	If Engines are on Improved Expansive Plan and Surface Condensers.	Estimated Cost of Engines.	Estimated Load Draught of Water.		Length	
									Forward.	Aft.	Between perpendiculars.	Of Keel for Tonnage.
				Tons.				£.	Ft. in.	Ft. in.	Ft. in.	Ft. in.
Curlew -	Deptford -	3	665	754	160 Double Screw.	Rennie -	No -	(a) 8,000	9 3	10 3	170 0	151 8½
Lapwing -	Devonport -	3	663	769	160 Double screw.	Rennie -	No -	(a) 7,840	9 5	10 4	170 0	151 7½
Magpie -	Portsmouth -	3	665	754	160 Double screw.	Day -	No -	(a) 8,000	9 3	10 3	170 0	151 6½
Philomel -	Deptford -	3	664	774	160 Double screw.	Maudslay -	No -	(a) 8,060	9 6	10 4	170 0	151 8½
Ringdove -	Portsmouth -	3	666	754	160 Double screw.	Maudslay -	No -	(a) 8,060	9 3	10 3	170 1	151 0½
Seagull -	Devonport -	3	663	754	160 Double screw.	Inglis -	No -	(a) 8,000	9 3	10 3	170 0	151 7½
Swallow -	Portsmouth -	3	663	754	160 Double screw.	Rennie -	No -	(a) 7,840	9 3	10 3	170 0	151 7½
Vulture -	Sheerness -	3	663	754	160 Double screw.	Engines not yet ordered			9 3	10 3	170 0	151 7½
Woodlark -	Chatham -	3	663	754	160 Double screw.	Engines not yet ordered			9 3	10 3	170 0	151 7½
Staunch -	Messrs. Mitchell's, Newcastle-on-Tyne.	1	200	153	25 Double screw.	Armstrong -	No -	(a) 1,732	6 0	6 0	74 11½	50 11½
Avon -	Portsmouth -	4	467	579	120 Double screw.	(k) Maudslay -	No -	(k) 3,995	8 0	8 8	155 2	139 8½
Beacon -	Chatham -	4	465	595	120 Double screw.	(k) Penn -	No -	(k) 3,465	7 11	9 0	155 0	139 6½
Boxer -	Deptford -	4	465	579	120 Double screw.	(k) Penn -	No -	(k) 3,400	8 0	8 8	155 0	139 6½
Cracker -	Portsmouth -	4	467	579	120 Double screw.	(k) Maudslay -	No -	(k) 3,962	(b) (m) 8 0	(b) (m) 9 0	155 1	139 5½
Dwarf -	Woolwich -	4	465	579	120 Double screw.	(k) Maudslay -	No -	(k) 3,569	(b) (m) 7 11	(b) (m) 9 3	155 0	139 6½
Elk -	Portsmouth -	4	465	579	120 Double screw.	(k) Penn -	No -	(k) 3,962	(m) 8 0	(m) 8 8	155 1	139 6½

(a) Contract price of engines.

(b) This is the actual load draught on completion of the ship for sea.

(c) This is the original contract price, exclusive of any sums subsequently authorised for works additional to the contract, and does not include the cost of Admiralty supervision.

(d) This, besides the payments made to contractors, includes expenses for Admiralty supervision.

(e) This is the amount that remains to be paid of the original contract price, together with any sums subsequently authorised for works additional to the contract which remain to be paid, but exclusive of expenses for Admiralty supervision.

- - BUILDING, OR ORDERED TO BE BUILT, DURING THE YEAR 1868—continued.

Breadth,		Probable Progress during the Year 1868-69.	Probable Time of Launching.	Probable Time of Completion, or of Delivery by Contractors.	Hull, Wood, or Iron.	Estimated First Cost of Hull.	Cost of Hull up to 31 March 1868.		Estimated Expenditure on Hull from 1 April 1868 to 31 March 1869.
Extreme.	For Tonnage.						Labour and Materials.	Incidental and Establishment Charges as enumerated in Statement prefixed.	
<i>Fl.</i> in.	<i>Fl.</i> in.					£.	£.		£.
29 0 $\frac{5}{8}$	28 8 $\frac{5}{8}$	3 $\frac{1}{8}$	Launched 20 Aug. 1868.	Jan. - 1869	Wood - -	23,200	6,467	As the Incidental and Establishment Charges prior to 1866-7 have each year been calculated on a different basis, it would be useless to insert them as so calculated in this Return, and the Report of the Parliamentary Committee on Admiralty Monies and Accounts was not received in sufficient time to admit of their being re-calculated for this	10,150
		(f)							
29 0	28 8	$\frac{1}{8}$	Launched 8 Nov. 1867.	Completed July 1868.	Wood - -	23,589	19,655		3,934
29 0 $\frac{1}{4}$	28 8 $\frac{1}{4}$	$\frac{1}{8}$	Launched 12 Feb. 1868.	Nearly complete.	Wood - -	23,200	16,945		6,255
29 0 $\frac{1}{4}$	28 8 $\frac{1}{4}$	---	Launched 29 Oct. 1867.	Completed March 1868.	Wood - -	22,691	20,193		nil.
		(f)							
29 1 $\frac{1}{2}$	28 9 $\frac{1}{2}$	$\frac{1}{8}$	Launched Sept. 1867.	Completed 21 April 1868.	Wood - - -	24,508	20,570		3,938
29 0	28 8	$\frac{1}{8}$	Launched 6 March 1868.	21 Nov. 1868	Wood - - -	23,200	14,348		8,852
29 0	28 8	$\frac{2}{8}$	January 1869	March - 1869	Wood - -	23,200	13,581		9,619
29 0	28 8	(f)							
29 0	28 8	$\frac{1}{8}$	Uncertain -	Uncertain -	Wood - -	23,200	1,815		4,350
29 0	28 8	$\frac{1}{8}$	Nov. - 1869	March - 1870	Wood - -	23,200	123		2,900
25 0 $\frac{3}{4}$	25 0 $\frac{3}{4}$	$\frac{1}{8}$	Launched 4 Dec. 1867	Completed May 1868.	Iron - -	(c) 6,450 including engines, &c.	(d) 6,245 including engines, &c.		(e) 340 including engines, &c.
25 0 $\frac{3}{4}$	25 0 $\frac{3}{4}$	---	Launched 2 Oct. 1867.	Completed March 1868.	Iron frames, wood planking.	(j) 15,000	16,513		nil.
25 0 $\frac{1}{4}$	25 0 $\frac{1}{4}$	---	Launched 17 Aug. 1867.	Completed Feb. 1868.	Iron frames, wood planking.	(j) 15,000	16,561		nil.
25 0 $\frac{3}{8}$	25 0 $\frac{3}{8}$	(f) $\frac{1}{8}$	Undocked 25 Jan. 1868.	Completed 26 May 1868.	Iron frames, wood planking.	(j) 15,000	12,378		2,622
25 1	25 1	(f) Nearly complete.	Launched 27 Nov. 1867.	Completed 21 April 1868.	Iron frames, wood planking.	(j) 15,000	15,969		nil.
25 0 $\frac{1}{4}$	25 0 $\frac{1}{4}$	(f) Nearly complete.	Launched 28 Nov. 1867.	Completed 1 May 1868.	Iron frames, wood planking.	(j) 15,000	15,527		nil.
25 0 $\frac{1}{2}$	25 0 $\frac{1}{2}$	(f) $\frac{1}{8}$	Launched 10 Jan. 1868.	Completed April 1868.	Iron frames, wood planking.	(j) 15,000	15,013		-

(f) Less progress was made on this ship last year than was anticipated.

(j) This includes the cost of masts, &c.

(k) Old engines were taken out of other ships, and repaired and refitted on these ships. The estimated cost given is the sum actually spent in

adapting and fitting the engines to the vessel, and in making and fitting new boilers. The store value of the old engines is not included, but it may be taken at from 1,000 l. to 1,800 l.

(m) The increased draught of water arises from the addition of a false keel.

RETURN OF VESSELS NOT ARMOUR PLATED,

NAMES.	Where Building.	Guns.	Tons.	Load Displacement.	Horse-power.	Name of Engine Maker.	If Engines are on Improved Expansive Plan and Surface Condensers.	Estimated Cost of Engines.	Estimated Load Draught of Water.		Length	
									Forward.	Aft.	Between Perpendiculars.	Of Keel for Tonnage.
				Tons.				£.	Ft. in.	Ft. in.	Ft. in.	Ft. in.
Flirt - -	Devonport -	4	464	579	120 Double screw.	Maudslay -	No -	(k) 3,709	(m) 8 0	(m) 8 8	155 0	139 6½
Fly - -	Devonport -	4	464	579	120 Double screw.	Maudslay -	No -	(k) 3,682	(m) 8 0	(m) 8 8	155 0	139 6½
Gnat - -	Pembroke -	4	465	556	120 Double screw.	Penn -	No -	(k) 3,913	(b) (m) 7 6	(b) (m) 8 8	155 0	139 6½
Thistle - -	Deptford -	4	465	579	120 Double screw.	Penn -	No -	(k) 3,473	(m) 8 0	(m) 8 8	155 0	139 6½
Growler - -	Mr. Lawrie's, Glasgow.	4	464	579	120 Double screw.	Penn -	No -	(k) 4,244	(m) 8 0	(m) 8 8	155 0	139 6½
Hart - -	Messrs. Thomson's, Glasgow.	4	464	579	120 Double screw.	Penn -	No -	(k) 3,642	(m) 8 0	(m) 8 8	155 0	139 6½
Hornet - -	Messrs. Pearse's, Stockton.	4	464	579	120 Double screw.	Penn -	No -	(k) 4,055	(m) 8 0	(m) 8 8	155 0	139 6½
Lynx - -	Messrs. Harland and Wolff's, Belfast.	4	464	579	120 Double screw.	Maudslay -	No -	(k) 4,012	(m) 8 0	(m) 8 8	155 0	139 6½
Midge - -	Messrs. Randolph, Elder & Co., Glasgow.	4	464	579	120 Double screw.	Penn -	No -	(k) 3,750	(m) 8 0	(m) 8 8	155 0	139 6½
Pert - -	Messrs. Reid & Co., Port Glasgow.	4	464	579	120 Double screw.	Penn -	No -	(k) 3,495	(m) 8 0	(m) 8 8	155 0	139 6½
Rocket - -	London Engineering Co's, Poplar.	4	464	579	120 Double screw.	Penn -	No -	(k) 3,642	(m) 8 0	(m) 8 8	155 0	139 6½
Teazer - -	Messrs. Laird's, Birkenhead.	4	464	579	120 Double screw.	Penn -	No -	(k) 3,893	(m) 8 0	(m) 8 8	155 0	139 6½
Carron - -	Devonport -	-	267	418	150	Coates and Young.	No -	(l) 2,300	9 6	9 6	130 0	114 10
Manly - -	Messrs. Rennie's, Greenwich.	-	135	188	50	Rennie -	No -	(a) 3,000	6 6	6 6	100 0	87 7½
Grinder - -	Mr. White's, Cowes.	-	332	506	150	Rennie -	No -	(a) 8,250	10 0	11 0	120 0	101 1½
Despatch - -	Messrs. Maudslay's, Greenwich.	-	257	370	40	Maudslay -	No -	(a) 2,488	8 1	8 1	115 0	99 10½

(a) Contract price of engines.

(b) This is the actual load draught on completion of the ship for sea.

(c) This is the original contract price, exclusive of any sums subsequently authorised for works additional to the contract, and does not include the cost of Admiralty supervision.

(d) This, besides the payments made to contractors, includes expenses for Admiralty supervision.

(e) This is the amount that remains to be paid of the original contract price, together with any sums subsequently authorised for works additional

to the contract which remain to be paid, but exclusive of expenses for Admiralty supervision.

(f) Less progress was made on this ship last year than was anticipated.

(g) This includes the cost of masts, &c.

(h) Old engines were taken out of other ships and repaired and refitted for these ships. The estimated cost given (except for the "Growler") is the sum actually spent in adapting and fitting the engines to the vessel, and in making and fitting new boilers. As the "Growler" is not completed, an estimate has been inserted in her case. The store value of the

BUILDING, OR ORDERED TO BE BUILT, DURING THE YEAR 1868—continued.

Breadth,		Probable Progress during the Year 1868-69.	Probable Time of Launching.	Probable Time of Completion or of Delivery by Contractors.	Hull, Wood, or Iron.	Estimated First Cost of Hull.	Cost of Hull up to 31 March 1868.		Estimated Expenditure on Hull from 1 April 1868 to 31 March 1869.
Extreme.	For Tonnage.						Labour and Materials.	Incidental and Establishment Charges as enumerated in Statement prefixed.	
<i>Ft. in.</i>	<i>Ft. in.</i>					£.	£.		£.
25 0	25 0	$\frac{1}{8}$ (f)	Launched 20 Dec. 1867.	Completed 1 May 1868.	Iron frames, wood planking.	15,000 (j)	14,254	As the Incidental and Establishment Charges prior to 1868-7 have each year been calculated on a different basis, it would be useless to insert them as so calculated in this Return, and the Report of the Parliamentary Committee on Admiralty Monies and Accounts was not received in sufficient time to admit of their being re-calculated for this Return, in accordance with the recommendations of that Committee.	746
25 0	25 0	$\frac{1}{8}$ (f)	Launched 20 Dec. 1867.	Completed 1 May 1868.	Iron frames, wood planking.	15,000 (j)	14,124		876
25 0	25 0	Nearly Complete. (f)	Launched 26 Nov. 1867.	Completed 22 April 1868.	Iron frames, wood planking.	15,000 (j)	15,824		nil.
25 0 $\frac{1}{4}$	25 0 $\frac{1}{4}$	$\frac{1\frac{1}{4}}{8}$ (f)	Launched 25 Jan. 1868.	Completed 6 June 1868.	Iron frames, wood planking.	15,000 (j)	12,713		2,287
25 0	25 0	$\frac{3\frac{1}{8}}{8}$ (f)	Sept. 1868	Oct. 1868	Iron frames, wood planking.	(p) (j) 12,504	(d) (j) 7,989		(q) (j) 5,063
25 0	25 0	$\frac{1\frac{1}{4}}{8}$ (f)	Launched 19 Aug. 1868.	Oct. 1868	Iron frames, wood planking.	(p) (j) 15,055	(d) (j) 11,382		(q) (j) 4,505
25 0	25 0	$\frac{1}{8}$ (f)	Launched 10 Mar. 1868.	Delivered 27 May 1868.	Iron frames, wood planking.	(p) (j) 15,475	(d) (j) 12,904		(q) (j) 4,100
25 0	25 0	$\frac{1}{8}$ (f)	Launched 25 April 1868.	Delivered 15 June 1868.	Iron frames, wood planking.	(p) (j) 13,432	(d) (j) 10,446		(q) (j) 4,296
25 0	25 0	$\frac{1\frac{1}{4}}{8}$ (f)	Launched 21 May 1868.	Delivered Aug. 1868.	Iron frames, wood planking.	(p) (j) 15,171	(d) (j) 11,597		(q) (j) 4,275
25 0	25 0	$\frac{2\frac{1}{4}}{8}$ (f)	Launched 22 June 1868.	Delivered Aug. 1868.	Iron frames, wood planking.	(p) (j) 15,983	(d) (j) 11,954		(q) (j) 4,923
25 0	25 0	$\frac{1\frac{1}{4}}{8}$ (f)	Launched 8 April 1868.	Delivered 20 June 1868.	Iron frames, wood planking.	(p) (j) 17,027	(d) (j) 14,980		(q) (j) 4,494
25 0	25 0	$\frac{7}{8}$ (f)	Undocked 28 April 1868.	Delivered 14 June 1868.	Iron frames, wood planking.	(p) (j) 16,679	(d) (j) 13,664		(q) (j) 4,452
21 0	20 11	Nearly Complete. (f)	Launched 31 May 1867.	Completed May 1868.	Wood - -	5,000	6,985		-
17 0	17 0	$\frac{1}{8}$ (f)	Launched 23 April 1868.	Completed 29 Aug. 1868.	Iron - -	(c) (j) 6,500 including engines, &c.	(d) (j) 6,552 including engines, &c.		(e) (j) 250 including engines, &c.
25 0	24 10	$\frac{7}{8}$ (f)	Launched 21 Mar. 1868.	Sept. 1868	Wood - -	(c) (j) 10,261	(d) (j) 9,632		(e) (j) 700
22 0	22 0	$\frac{8}{8}$ (f)	Feb. 1869	Feb. 1869	Iron - -	(c) 4,250	-		(c) 4,250
									£. 429,761

engines is not included, but it may be taken at from 1,000*l.* to 3,000*l.*

(i) The engines of the "Prospero," and boilers from "Arrow" and "Snake," were repaired and refitted for this vessel. The estimated cost even is the estimated expense of fitting these old engines and boilers, and includes the store value of the old engines and boilers used.

(m) The increased draught of water arises from the addition of a false pl.

(p) This estimated first cost consists of the original contract price, to-

gether with the estimated cost for labour and materials of completing the vessels for sea in Her Majesty's Dockyards, Admiralty supervision, &c.

(q) This is the amount that remains to be paid of the original contract price, together with any sums subsequently authorised for works additional to the contract, which remain to be paid, and also the estimated cost of Admiralty supervision and of completing the vessels for sea in Her Majesty's Dockyards.

E. J. Reed, for Controller of the Navy.

VESELS NOT ARMOUR-PLATED.

RETURN of VESSELS NOT ARMOUR-PLATED, Building,
or Ordered to be Built, during the Year 1868; pro-
bable Progress during the Year; when to be
Launched; when Completed; and Amount expended
up to 31 March 1868; and Estimated Amount up
to 31 March 1869; &c.

(*Mr. Laird.*)

Ordered, by The House of Commons, to be Printed,
27, July 1868.

NAVY (THE "WARRIOR," &c.).

RETURN to an Order of the Honourable The House of Commons,
dated 15 May 1868;—for

COPY "of the CONTROLLER'S REPORT on the THREE TRIALS lately concluded
of the "WARRIOR," "MINOTAUR," and "BELLEROPHON."

Admiralty,
18 May 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

(*Lord John Hay.*)

Ordered, by The House of Commons, to be Printed,
19 May 1868.

**CONTROLLER'S REPORT on the Three Trials lately concluded of the
"Warrior," "Minotaur," and "Bellerophon."**

11 May, 1868.

THREE very important experiments have just been brought to an end which will, I confidently believe, modify the views often expressed as to the measured mile trials, and the speed obtainable by our ships for several consecutive hours in the open sea.

I therefore beg leave to call their Lordships' attention to the case.

Permission was given by the Board for the "Minotaur," the "Warrior," and the "Bellerophon," to be tried in the usual way at the measured mile, with their bottoms clean, and after these trials, for six hours consecutive steaming outside the Isle of Wight, to compare the results so obtained as regarded indicated horse-power, number of revolutions, speed, &c., with those due to the measured mile trial.

The "Minotaur" was five days out of dock when tried at the measured mile, and nine days out of dock when tried for six consecutive hours.

The "Warrior" was eight days out of dock when tried at the measured mile, and eleven days out of dock when tried for six consecutive hours.

The "Bellerophon" was fourteen days out of dock when tried at the measured mile, and twenty-one days out of dock when tried for six consecutive hours.

In all these cases the weather was splendidly fine; there was a little more wind during the "Warrior's" trial than during the other two trials; the water smooth, but the "Bellerophon" had the disadvantage of having been twice as long in the water as the other two ships, and at this time of the year the growth of weeds is particularly rapid.

At the Stokes Bay measured mile trial the following were the results :—

NAME of SHIP.	Indicated Horse Power.	Revolutions per Minute.	Speed of Ship.
"Minotaur" - - - - -	6,702	55·913	14·411
"Warrior" - - - - -	5,267	53·14	14·079
"Bellerophon" - - - - -	6,002	72·922	13·874

but at the six hours' trial :—

NAME of SHIP.	Indicated Horse Power.	Revolutions per Minute.	Speed of Ship.
"Minotaur" - - - - -	6,193	54·96	14·165
"Warrior" - - - - -	5,092	52·6	13·936
"Bellerophon" - - - - -	6,199	73·863	14·053

It will be seen that while the "Minotaur" lost in speed in the six hours' trial, ·246 of a knot per hour, and that her revolutions fell off ·953 per minute, the "Warrior" only lost ·143 of a knot, and her revolutions fell off ·8 per minute, the indicated horse-power having in each case fallen short of the Stokes Bay performance. But in the "Bellerophon" the case was reversed; she gained ·176 of a knot per hour in speed, increased the revolutions by ·943 per minute, and developed about 200 more horse-power than on the measured mile, showing conclusively that if the expected horse-power were realized, the calculated speed of the ship would be assured.

These experiments prove that with good coal and good stoking there is but little difference between the results of a trial at the measured mile and one last-
ing

ing for six hours on the open sea, all the circumstances being alike; that the bad performances of the “Warrior,” “Minotaur,” and “Bellerophon,” during their cruise last autumn, arose from causes over which the designers of these ships had no control, and that any judgment on the qualities of these ships, dependent on such records, would have been illusory and misleading.

I beg leave to forward the Tables of the calculated results of these trials.

(signed) *Robert Spencer Robinson.*

SIX CONSECUTIVE HOURS' TRIAL.

Admiralty, 5 May 1868.

Vessel's Name - - - - -	Minotaur.	Warrior.	Bellerophon.	
Number of days out of dock at time of trial.	9	11.	21.	
Nominal horse power - - - - -	1,350.	1,250.	1,000.	
Proportion of boiler power used - -	Full.	Full.	Full.	
When tried - - - - -	18 March 1868.	3 April 1868.	2 May 1868.	
Where tried - - - - -	From Warner to St. Alban's Head and back.			
Draught of water - -	{ Forward	26' 0"	25' 9."	21' 11."
	{ Aft -	26' 10"	27' 7".	26' 8."
Midship section - -	<i>Square feet</i>	1,322.	1,260.	1,207.
Displacement - - -	<i>Tons</i>	10,275.	9,214.	7,369.
Load on safety-valve - - -	<i>Lbs.</i>	25.	20.	30.
Vacuum - - - - -	{ Forward	26.49.	24.73.	24.93.
	{ Aft -	26.64.	25.04.	24.81.
Weather barometer - <i>Inches of Mercury</i>	30.4.	30.368.	Not recorded.	
Mean pressure in cylinders - <i>Lbs.</i>	25.144.	23.401.	20.268.	
Revolutions of engines - - -	<i>No.</i>	54.96	52.6.	73.863.
Indicated horse power - - - -		6,193.	5,092.	6,199.
Speed of vessel - - -	<i>Knots</i>	14.165.	13.936.	14.053.
Force of wind - - - - -		2.	3 to 4.	3 to 4.
State of sea - - - - -		Smooth.	Smooth.	Smooth.
Speed ³ × mid section - - - -		606.77.	669.7.	540.3.
(Indicated horse power.)				
Speed ³ × displacement ² / ₃ - - - -		216.9.	233.6.	169.5.
(Indicated horse power.)				
Propeller - - - - -	{ Description	Four bladed, increasing pitch.	Griffiths' variable pitch.	Griffiths' variable pitch.
	{ Diameter -	24' 0".	24' 6."	23' 6."
	{ Pitch -	Mean 25' 0".	30' 0."	20' 1."
	{ Slip per cent.	Negative 4.47.	10.51.	4.00.

The speeds given are derived from the number of revolutions, assuming the slip to be in the same proportion to the speed of the screw as at the measured mile trials.

MEASURED MILE TRIALS.

Admiralty, 12 May 1868.

Vessel's Name - - - - -	Minotaur.	Warrior.	Bellerophon.	
Number of days out of dock at the time of trial	5.	8.	14.	
Nominal horse power - - - - -	1,350.	1,250.	1,000.	
Proportion of boiler power used - -	Full.	Full.	Full.	
When tried - - - - -	14 March 1868.	1 April 1868.	25 April 1868.	
Where tried - - - - -	Stokes' Bay.	Stokes' Bay.	Stokes' Bay.	
Draught of water - - { Forward	25' 10".	25' 9".	21' 9".	
- - { Aft -	26' 10".	27' 8".	26' 7".	
Midship section - - - Square feet	1,318.	1,263.	1,200.	
Displacement - - - - - Tons	10,230.	9,231.	7,319.	
Load on safety valve - - - Lbs.	25.	20.	30.	
Vacuum - - - - - { Forward	25·875.	25·125.	25·16.	
- - { Aft -	26·583.	25·125.	25·91.	
Weather barometer - Inches of Mercury	30·325.	30·462.	30·044.	
Mean pressure in cylinders - Lbs.	26·749.	23·962.	19·891.	
Revolutions of engines - - - No.	55·913.	53·14.	72·923.	
Indicated horse power - - - -	6,702.	5,267.	6,002.	
Speed of vessel - - - - - Knots	14·411.	14·079.	13·874.	
Force of wind - - - - -	3.	1.	1.	
State of sea - - - - -	Smooth.	Smooth.	Smooth.	
Speed ³ × mid section - - - - -	588·5.	669·2.	534·1.	
(Indicated horse power.)				
Speed ³ × displacement $\frac{2}{3}$ - - - -	210·4.	233·1.	167·8.	
(Indicated horse power.)				
Propeller - - - { Description -	Four-bladed, increasing pitch.	Griffiths' variable pitch.	Griffiths' variable pitch.	
	Diameter -	24' 0".	24' 6".	23' 6".
	Pitch - -	Mean 25' 0".	30' 0".	20' 1".
	Slip per cent. -	4·47.	10·51.	4·01.

Navy (THE "WARRIOR," &c.).

COPY "of the CONTROLLER'S REPORT on the
THREE TRIALS lately concluded of the "WAR-
RIOR," "MINOTAUR," and "BELLEROPHON."

(*Lord John Hay.*)

*Ordered, by The House of Commons, to be Printed,
19 May 1868.*

NAVY (THE "WARRIOR," &c.).

RETURN to an Order of the Honourable The House of Commons,
dated 8 June 1868 ;—for,

COPY "of the REPORTS of the OFFICERS conducting the TRIALS of SPEEDS
of the 'WARRIOR,' 'MINOTAUR,' and 'BELLEROPHON,' referred to in the
REPORT of the CONTROLLER of the 11th day of May 1868."

Admiralty, }
15 June 1868. }

JOHN HENRY BRIGGS,
Chief Clerk.

(*Mr. Seely.*)

Ordered, by The House of Commons, to be Printed,
16 June 1868.

"MINOTAUR."

PORTSMOUTH YARD, 17th March 1868.

REPORT of TRIAL of Her Majesty's Steam Vessel "MINOTAUR."

										FULL POWER.
When tried	-	-	-	-	-	-	-	-	-	14th March 1868.
Where tried	-	-	-	-	-	-	-	-	-	Stokes Bay.
Nominal horse-power	-	-	-	-	-	-	-	-	-	1,350 horses.
Maker's name	-	-	-	-	-	-	-	-	-	Messrs. Penn & Son.
Draught of water	-	-	-	-	-	-	-	-	-	25 feet 10 inches.
										26 feet 10 inches.
Load on safety valve	-	-	-	-	-	-	-	-	-	25 lbs.
Pressure of steam in boilers	-	-	-	-	-	-	-	-	-	25·83.
Vacuum in condensers	-	-	-	-	-	-	-	-	-	25·875.
										26·583.
Number of revolutions of engines	-	-	-	-	-	-	-	-	-	56·42.
										55·913.
Mean pressure in cylinders	-	-	-	-	-	-	-	-	-	26·749 lbs.
Indicated horse-power	-	-	-	-	-	-	-	-	-	6705·09.
Speed of vessel	-	-	-	-	-	-	-	-	-	14·411 knots.
Time under way	-	-	-	-	-	-	-	-	-	3 hours 20 minutes.
Time at full speed without stopping	-	-	-	-	-	-	-	-	-	2 hours 45 minutes.
Weather barometer	-	-	-	-	-	-	-	-	-	30·325 inches.
Wind	-	-	-	-	-	-	-	-	-	3.
										W. S. W.
State of the sea	-	-	-	-	-	-	-	-	-	Smooth.
State of the masts, yards, &c.	-	-	-	-	-	-	-	-	-	Complete.
Quantity of coal on board	-	-	-	-	-	-	-	-	-	696 tons, including 50 tons trial coal.
Quantity of stores	-	-	-	-	-	-	-	-	-	6 months.
Armament	-	-	-	-	-	-	-	-	-	Complete.
Propeller	-	-	-	-	-	-	-	-	-	Four bladed, left handed, variable pitch, varying from 22 feet 2 inches to 28 feet 2 inches.
										24 feet by measurement.
										25 feet, this trial, 14th March.
										1 foot 10½ inches at periphery of blade.
										2 feet 4½ inches at root of blade.
Immersion of upper edge	-	-	-	-	-	-	-	-	-	1 foot 11 inches.
Condition of distilling apparatus	-	-	-	-	-	-	-	-	-	Not tried.
Condition of engine-room telegraph	-	-	-	-	-	-	-	-	-	"
Engines stopped from time of moving telegraph	-	-	-	-	-	-	-	-	-	"
Engines started ahead	-	-	ditto	-	-	-	-	-	-	"
Engines started astern	-	-	ditto	-	-	-	-	-	-	"

REPORT of Trial of Her Majesty's Steam Vessel “Minotaur”—*continued.*

TEMPERATURES, &c.

When taken.	On Deck.	In Engine Room.	In Forward Stokehole.	In After Stokehole.
Commencement of trial -	49°	Port - - 88°	Fore part - - 90°	90°
		Mid. - - 66°	Middle - - -	106°
		Starboard - 69°	After part - 88°	96°
Completion of trial - -	50°	Port - - 98°	Fore part - 98°	114°
		Mid. - - 74°	Middle - - -	123°
		Starboard - 77°	After part - 100°	112°

Number of Runs.	Revolutions of Engines per Minute.	Observed Time.	Speed due to Time.	First Mean Speeds.	Second Mean Speeds.
Full Power.	1	55.91	4 3	14.815	
	2	56.07	4 19	13.900	14.435
	3	55.21	3 58	15.126	14.396
	4	56.42	4 28	13.433	14.393
	5	55.58	3 51	15.584	14.422
	6	56.29	4 35	13.091	
	55.91	Mean.		True Mean Speed	14.411

REMARKS as to Performance of Vessel, Engines, Boilers, &c. :

The engines and boilers worked in a satisfactory manner, and the machinery is in all respects fit for service at sea; the steam was maintained throughout the trial at blowing-off point.

William Ch. Chamberlain,
Captain of Steam Reserve.

W. G. Wratten,
For Chief Inspector of Machinery Afloat.

William H. Steil,
For Chief Engineer of the Dockyard and
Inspector of Machinery.

(Forwarded),
George G. Wellesley,
Admiral Superintendent.

REPORT of Trial of Her Majesty's Steam Vessel “Warrior”—*continued.*

TEMPERATURES, &c.

When taken.	On Deck.	In Engine Room.	In Forward Stokehole.	In After Stokehole.
Commencement of trial -	64°	Port - - 84° Mid. - - 69° Starboard - 72°	Fore part - - 87° Middle - - - After part - 90°	110° 102° 79°
Completion of trial - -	54°	Port - - 88° Mid. - - 72° Starboard - 69°	Fore part - - 90° Middle - - - After part - 98°	130° 104° 80°

Number of Runs.	Revolutions of Engines per Minute.	Observed Time.	Speed due to Time.	First Mean Speeds.	Second Mean Speeds.
Full Power.	1	53.39	4 5	14.694	
	2	52.94	4 32	13.235	14.040
	3	53.00	4 0	15.000	14.081
	4	53.02	4 35	13.091	14.092
	5	53.41	3 57	15.190	14.105
	6	53.09	4 38	12.950	
	53.14	Mean.	True Mean Speed		14.079

REMARKS as to Performance of Vessel, Engines, Boilers, &c. :

The engines and boilers worked in a satisfactory manner, and the machinery is in all respects fit for service at sea. Steam was maintained throughout the trial at blowing-off point.

William Ch. Chamberlain,
Captain of Steam Reserve.

G. Murdoch,
Chief Inspector of Machinery Afloat.

William H. Steil,
For Chief Engineer of the Dockyard and
Inspector of Machinery.

(Forwarded),
George G. Wellesley,
Admiral Superintendent.

"BELLEROPHON."

PORTSMOUTH YARD, 27th April 1868.

REPORT of TRIAL of Her Majesty's Steam Vessel "BELLEROPHON."

										FULL POWER.
When tried	-	-	-	-	-	-	-	-	-	25th April 1868.
Where tried	-	-	-	-	-	-	-	-	-	Stokes Bay.
Nominal horse-power	-	-	-	-	-	-	-	-	-	1,000 horses.
Maker's name	-	-	-	-	-	-	-	-	-	Messrs. Penn & Son.
Draught of water	-	-	-	-	-	-	-	-	-	Forward - 21 feet 9 inches.
										Aft - 26 feet 7 inches.
Load on safety valve	-	-	-	-	-	-	-	-	-	30 lbs.
Pressure of steam in boilers	-	-	-	-	-	-	-	-	-	30 lbs.
Vacuum in condensers	-	-	-	-	-	-	-	-	-	Forward - 25.16 inches.
										Aft - 25.91 inches.
Number of revolutions of engines	-	-	-	-	-	-	-	-	-	Maximum - 73.22.
										Mean - 72.92.
Mean pressure in cylinders	-	-	-	-	-	-	-	-	-	19.891 lbs.
Indicated horse-power	-	-	-	-	-	-	-	-	-	6002.77 horse-power.
Speed of vessel	-	-	-	-	-	-	-	-	-	13.874 knots.
Time under way	-	-	-	-	-	-	-	-	-	2 hours 40 minutes.
Time at full speed without stopping	-	-	-	-	-	-	-	-	-	2 hours 20 minutes.
Weather barometer	-	-	-	-	-	-	-	-	-	30.044 inches.
Wind	-	-	-	-	-	-	-	-	-	Force - 1.
										Direction - Variable.
State of the sea	-	-	-	-	-	-	-	-	-	Calm.
State of the masts, yards, &c.	-	-	-	-	-	-	-	-	-	Complete.
Quantity of coal on board	-	-	-	-	-	-	-	-	-	474 tons, including 68 tons trial coal.
Quantity of stores	-	-	-	-	-	-	-	-	-	6 months.
Armament	-	-	-	-	-	-	-	-	-	Incomplete.*
Propeller	-	-	-	-	-	-	-	-	-	Description - Griffith's, pitch varying from 18 feet to 22 feet.
										Diameter - 23 feet 6 inches.
										Pitch - 20 feet 1 inch.
										Length - 2 feet 7 inches.
										Immersion of upper edge - 2 feet 3 inches.
Condition of distilling apparatus	-	-	-	-	-	-	-	-	-	Good.
Condition of engine-room telegraph	-	-	-	-	-	-	-	-	-	Completely out of order.
Engines stopped from time of moving telegraph	-	-	-	-	-	-	-	-	-	Not tried.
Engines started ahead	-	-	-	-	-	-	-	-	-	"
Engines started astern	-	-	-	-	-	-	-	-	-	"

* Forty-five tons of ballast were on board in lieu of shells, and five tons in lieu of a gun-carriage.—(*Report of Captain of the Ship.*)

REPORT of Trial of Her Majesty's Steam Vessel “Bellerophon”—*continued.*

TEMPERATURES, &c.

When taken.	On Deck.	In Engine Room.	In Forward Stokehole.	In After Stokehole.
Commencement of trial -	59½°	Starboard - 73° Port - 82°	Fore part - 82° Middle - 118° After part - 123°	92° 117° 122°
Completion of trial -	58°	Starboard - 76° Port - 83°	Fore part - 90° Middle - 112° After part - 126°	96° 112° 114°

Number of Runs.	Temperature of Steam in Engine Room.	Revolutions of Engines per Minute.	Observed Time.	Speed due to Time.	First Mean Speeds.	Second Mean Speeds.
Full Power.	1 268°	72·71	Min. sec. 3 56	15·254	13·667	
	2 270	72·69	4 58	12·081	13·970	13·818
	3 270°	73·22	3 47	15·859	13·890	13·930
	4 270°	72·91	5 2	11·921	13·890	13·890
	5 270°	73·22	3 47	15·859	13·831	13·860
	6 270°	72·79	5 5	11·803		
		72·92	Mean.	True Mean Speed		13·874

REMARKS as to Performance of Vessel, Engines, Boilers, &c. :

The engines and boilers worked in a satisfactory manner, and the machinery is in all respects fit for service at sea.

William Ch. Chamberlain,
Captain of Steam Reserve.

G. Murdoch,
Chief Inspector of Machinery Afloat.

Andrew Murray,
Chief Engineer of the Dockyard and
Inspector of Machinery.

The ship, on the day of trial, had been out of dock for 14 days.

A. M.

(Forwarded.)
George G. Wellesley,
Admiral Superintendent.

"MINOTAUR."

PORTSMOUTH YARD, 21st March 1868.

REPORT of TRIAL of Her Majesty's Steam Vessel "MINOTAUR."

										FULL POWER.	
When tried	-	-	-	-	-	-	-	-	-	18th March 1868.	
Where tried	-	-	-	-	-	-	-	-	-	From "Warner" to St. Alban's Head and back.	
Nominal horse-power	-	-	-	-	-	-	-	-	-	1,350 horse-power.	
Maker's name	-	-	-	-	-	-	-	-	-	Messrs. J. Penn & Son.	
Draught of water	-	-	Forward	-	-	-	-	-	-	26 feet.	
			Aft	-	-	-	-	-	-	-	26 feet 10 inches.
Load on safety valve	-	-	-	-	-	-	-	-	-	25 lbs.	
Pressure of steam in boilers	-	-	-	-	-	-	-	-	-	21.57 lbs.	
Vacuum in condensers	-	-	Forward	-	-	-	-	-	-	26.49 inches.	
			Aft	-	-	-	-	-	-	-	26.64 inches.
Number of revolutions of engines	-	-	Maximum	-	-	-	-	-	-	55.55 per minute; 3,333 per hour; 19,785 during the six hours.	
			Mean	-	-	-	-	-	-	-	54.95 per minute.
Mean pressure in cylinders	-	-	-	-	-	-	-	-	-	25.144 lbs.	
Indicated horse-power	-	-	-	-	-	-	-	-	-	6194.55 horse-power.	
Speed of vessel	-	-	-	-	-	-	-	-	-	14.039 knots.*	
Time under way	-	-	-	-	-	-	-	-	-	7 hours 30 minutes.	
Time at full speed without stopping	-	-	-	-	-	-	-	-	-	6 hours 45 minutes; 6 hours the time of trial.	
Weather barometer	-	-	-	-	-	-	-	-	-	30.400 inches.	
Wind	-	-	Force	-	-	-	-	-	-	2.	
			Direction	-	-	-	-	-	-	-	Variable.
State of the sea	-	-	-	-	-	-	-	-	-	Smooth.	
State of the masts, yards, &c.	-	-	-	-	-	-	-	-	-	Complete.	
Quantity of coal on board	-	-	-	-	-	-	-	-	-	692 tons, including 50 tons of trial coal.	
Quantity of coals used during the day.	See note (A.) on p. 10									About 75 tons.	
Quantity of stores	-	-	-	-	-	-	-	-	-	Six months.	
Armament	-	-	-	-	-	-	-	-	-	Complete.	
Propeller	-	-	Description	-	-	-	-	-	-	Four bladed, left handed, variable pitch, varying from 22 feet 2 inches to 28 feet 2 inches.	
			Diameter	-	-	-	-	-	-	-	24 feet.
			Pitch	-	-	-	-	-	-	-	25 feet.
			Length	-	-	-	-	-	-	-	1 foot 10 $\frac{1}{4}$ inches at periphery of blade.
			Immersion of upper edge	-	-	-	-	-	-	-	2 feet 4 $\frac{1}{2}$ inches at root. 1 foot 11 inches.
Condition of distilling apparatus	-	-	-	-	-	-	-	-	-	Not taken.	
Condition of engine-room telegraph	-	-	-	-	-	-	-	-	-	"	
Engines stopped from time of moving telegraph	-	-	-	-	-	-	-	-	-	"	
Engines started ahead	-	-	-	ditto	-	-	-	-	-	"	
Engines started astern	-	-	-	ditto	-	-	-	-	-	"	

* See note at foot of page 9.

REPORT of Trial of Her Majesty's Steam Vessel “Minotaur.”—*continued.*

TEMPERATURES, &c.

When taken.	On Deck.	In Engine Room.			In Forward Stokehole.		In After Stokehole.		
		Starboard.	Mid.	Port.	Forward.	Aft.	Forward.	Mid.	Aft.
H. M.									
10 30 a. m.	48°	66°	68°	94°	116°	89°	109°	120°	104°
11 30 a. m.	48°	68°	67°	97°	120°	99°	110°	119°	110°
12 30 p. m.	49°	67°	69°	98°	122°	98°	111°	120°	109°
1 30 p. m.	49°	68°	68°	97°	121°	99°	110°	122°	112°
2 30 p. m.	48°	70°	72°	100°	117°	97°	118°	114°	98°

Number of Hours.	Revolutions of Engines per Hour.	Mean Time.			Speed due to Time.	First Mean Speeds.	Second Mean Speeds.
		H.	M.	S.			
Full Power.		From					
		10 21 20 a. m.					
		to					
	1	3,333	11 21 20 a. m.				
	2	3,326	12 21 20 p. m.		1. Distance run by chart	- 90.0 miles.	
	3	3,333	1 21 20 p. m.		2. Deducting tide	- 85.0† „	
	4	3,286	2 21 20 p. m.		3. Shown by patent log	- 79.75 „	
	5	3,321	3 21 20 p. m.		*4. Distance due to revolutions, 83.84† „		
	6	3,186	4 21 20 p. m.				
		3,297.5	Mean.				

* Shown by mean number of revolutions of engines per mile due at the measured mile trial to one mile (237), on 14th March 1868.

† An error occurs in this Report. In stating the distance due to revolutions “shown by the mean of the number of revolutions of the engines per mile due at the measured mile trial to one mile,” the officers give 237 as the number; it should be 232.7. The mean revolutions of the engines per minute on the measured mile trial were 55.91, and the mean time of running the mile was $\frac{60}{14.411} = 4.163$ minutes.

Therefore, $4.163 \times 55.91 = 232.7$, is the true number of revolutions per mile. If this correction is made, it will be found that the distance due to the revolutions is *not* 83.84 knots, but 85 knots, and that the speed per hour was 14.165 knots, as stated in the Report laid before the House of Commons.

‡ See (B.) page 10.

R. S. R.

REPORT of Trial of Her Majesty's Steam Vessel "Minotaur"—*continued.*

REMARKS as to Performance of Vessel, Engines, Boilers, &c.:

The engines and boilers worked in a satisfactory manner.

The supply of water to the boilers was not sufficient, and the donkey feed had to be used. One of the valves of one end of one of the feed pumps, on examination, has been found carried away, which will account for this deficiency; there are also a few unimportant leaks in the boilers. These petty defects are in hand, and will be made good in three days; after this is done, the machinery will be in all respects fit for service at sea.

Wm. C. Chamberlain,
Captain of Steam Reserve.

W. G. Wratten,
For Chief Inspector of Machinery Afloat (sick).

Andrew Murray,
Chief Engineer of the Dockyard and
Inspector of Machinery.

(A.) The trial coal was expended at 2 H. 40 M. P. M., or 1 H. 41 M. 20 S. prior to the conclusion of the six hours' run, during which period 25 tons of Welsh coals from the ship's bunkers were burnt, and it was of very good quality.

(B.) It is the opinion of Messrs. Harding and William Main, Queen's pilots, that no allowance for tide is due for the run West, as it ran as much one way as the other; and that five miles would be the correct deduction for tide to be made from the ship's apparent speed through the water on her return run.

The patent log is not considered to have acted efficiently. Thus, if a mean be taken between the distance run through the water after allowing for the tide, and the distance run through the water based upon the number of revolutions necessary to drive the ship one mile, as shown at the measured mile trial, the true speed will be as follows:—

85 miles in six hours, giving	-	-	-	-	-	-	14.166 knots.
*83.48 miles - ditto	-	-	-	-	-	-	13.913 "
Mean speed							14.039 "

W. C. Chamberlain, Captain.

J. G. Goodenough, Captain,
Her Majesty's Ship "Minotaur."

John Sanders, Chief Engineer,
Her Majesty's Ship "Minotaur."

W. H. Steil, Assistant to Chief Engineer
of the Dockyard.

(Forwarded.)

Geo. G. Wellesley,
Admiral Superintendent.

* See note (†) at foot of page 9.

DEEP SEA TRIAL of Her Majesty's Ship "MINOTAUR," 18th March 1868.

T I M E.	Pressure of Steam.	V A C U U M.		R E V O L U T I O N S			Mean Pressure.	Indicated Horse Power.	Density of Water in Boilers.		Distance run as shown by Counter.	Position of Ship.	REMARKS.
		Forward.	Aft.	Total.	By Counter.				Starboard.	Port.			
					Per Half Hour.	Per Minute.							
H. M. S. 10 21 20 a.m. to	Lbs.						Lbs.						
10 51 20 a.m.	23·25	26·5	26·5	1,652	1,652	55·06	26·225	6473·76	-	-	6·97	10 H. 21 M. 20 S. a.m. abreast of "War- ner" light ship.	
11 21 20 a.m.	23·125	26·5	26·5	3,333	1,681	56·03	26·187	6578·31	-	-	13·64		
11 51 20 a.m.	22·375	26·25	26·25	4,997	1,664	55·46	25·875	6433·81	-	-	21·08		
12 21 20 p.m.	22·25	26·5	26·5	6,659	1,662	55·4	25·700	6383·38	-	-	28·09		
12 51 20 p.m.	23·00	26·5	26·5	8,320	1,661	55·36	25·400	6304·27	-	-	35·10		
1 21 20 p.m.	21·875	26·25	26·5	9,992	1,672	55·73	25·462	6450·89	-	-	42·16	Put helm hard-a- starboard to re- turn to Spithead.	
1 51 20 p.m.	21·375	26·675	26·675	11,625	1,633	54·43	25·025	6106·64	Not taken		49·05		
2 21 20 p.m.	21·25	26·50	26·675	13,278	1,653	55·10	24·687	6342·46	-	-	56·02		
2 51 20 p.m.	21·375	26·675	26·675	14,940	1,662	55·4	24·950	6196·97	-	-	62·19		
3 21 20 p.m.	20·125	26·50	26·875	16,599	1,659	55·3	25·275	6266·44	-	-	70·33		
3 51 20 p.m.	18·00	26·675	27·5	18,198	1,599	53·3	22·937	5481·15	-	-	76·78		
4 21 20 p.m.	19·625	26·5	27·25	19,785	1,587	52·9	23·137	5487·41	-	-	83·84		

Tonnage of ship - - - - - 6,643 tons.
 Distance due to revolutions by counter, in 6 hours run - - - 83·48 knots.
 Total power developed during the run, at 13·913 knots per hour - - - 2330038 horse-power.
 Speed per hour - - - - - 13·913 knots.
 One ton moved one knot, at the above speed, requires - - - 4·021 horse-power.

REPORT of Trial of Her Majesty's Steam Vessel “Warrior”—*continued.*

TEMPERATURES, &c.

When taken.	On Deck.	In Engine Room.			In Forward Stokehole.		In After Stokehole.		
		Port.	Mid.	Starboard.	Forward.	Aft.	Forward.	Mid.	Aft.
H. M.									
11 21 a.m.	56°	84°	70°	70°	102°	84°	106°	112°	68°
2 21 p.m.	54°	98°	76°	72°	110°	99°	116°	115°	72°
5 21 p.m.	50°	100°	80°	76°	109°	92°	109°	100°	76°

Number of Hours.	Revolutions of Engines per Hour.	Observed Time.			Speed due to Time.	First Mean Speeds.	Second Mean Speeds.
		H.	M.	S.			
Full Power.		11	21	40 a.m.			
		to					
	1	12	21	40 p.m.			
	2	1	21	40 p.m.	Distance run by chart - - 89·5 miles.		
	3	2	21	40 p.m.	Distance shown by patent log - 74' „		
	4	3	21	40 p.m.	*Distance due to revolutions - 82·84† „		
	5	4	21	40 p.m.			
	6	5	21	40 p.m.			
	3,156	Mean.					

* Shown by mean number of revolutions of engines per mile, due at the measured mile trial to one mile (228·33), 1st April 1868.

† An error similar to that which occurs in the Report on the “Minotaur's” trial, occurs in this Report also. The number of revolutions of the engines per mile was, at the measured mile, 226·42, and not 228·33, as given by the officers. The mean revolutions of the engines per minute at the measured mile were, 53·14, and the mean time of running the mile was $\frac{60}{14·079} = 4·261$ minutes. Therefore, $4·261 \times 53·14 = 226·43$, is the true number of revolutions per mile. If this correction is made it will be found that the distance due to revolutions is, *not* 82·84 knots, but 83·61 knots, and that the speed per hour was 13·936 knots, as stated in the Report laid before the House of Commons.

R. S. R.

REMARKS as to Performance of Vessel, Engines, Boilers, &c. :

The engines and boilers worked in a satisfactory manner.
There was a good supply of steam throughout the trial.

William Ch. Chamberlain,
Captain of Steam Reserve.

G. Murdoch,
Chief Inspector of Machinery Afloat.

Andrew Murray,
Chief Engineer of the Yard.

(Approved),

George G. Wellesley,
Admiral Superintendent.

DEEP SEA TRIAL of Her Majesty's Ship "WARRIOR," 3rd April 1868.

T I M E.	Pressure of Steam.	V A C U U M.		R E V O L U T I O N S			Mean Pressure.	Indicated Horse Power.	Density of Water in Boilers.		Distance Run.		Position of Ship.	R E M A R K S.
		Forward.	Aft.	By Counter.		Per Minute.			Starboard.	Port.	By Counter.	By Knots.		
				Total.	Time.									
H. M. S.	Lbs.						Lbs.		°	°				Com- menced six hours run.
11 19 10 a. m.	19.75	24.5	24.75	000,000	-	51.0	-	5012.28	16.0	17.0	-	-	-	
11 49 10 a. m.	19.5	24.75	25.0	1,528	1,528	52.5	23.6	5203.80	18.0	17.5	6.701	7.1	"Warner Light" on with Bembridge Point.	
12 19 10 p. m.	19.0	24.75	25.0	3,114	1,586	53.0	23.4	5208.84	19.5	20.0	13.66	14.3		
12 49 10 p. m.	19.5	24.75	25.0	4,708	1,589	53.0	23.3	5186.58	20.5	19.0	20.62	21.6		
1 19 10 p. m.	19.25	24.75	25.0	6,315	1,612	53.25	23.45	5244.58	21.5	20.5	27.77	28.9	-	* 2 H. p. m. Com- menced to clean fires.
1 49 10 p. m.	19.25	24.75	25.0	7,925	1,610	53.50	23.9	5370.23	20.0	20.5	34.73	36.1		
2 19 10 p. m.	19.75	24.75	25.0	9,521	1,596	52.2	23.7	5125.98	20.0	19.0	41.75	43.3	2 H. 19 M. 10 s. Off St. Alban's, put helm a starboard to return to Spithead.	3 H. 45 M. p. m. Com- menced to use coal from bunker; trial coal finished.
2 49 10 p. m.	19.25	24.75	25.0	11,089	1,567	52.0	23.2	5066.88	21.5	23.0	48.6	Ceased taking those observa- tions.		
3 19 10 p. m.	19.25	24.75	25.0	12,657	1,569	52.0	23.3	5088.72	20.5	21.5	55.5	63.33		
3 49 10 p. m.	19.00	24.75	25.25	14,223	1,566	52.25	23.3	5113.18	21.0	20.0	69.20			
4 19 10 p. m.	19.5	24.75	25.25	15,787	1,564	52.0	24.0	5241.60	24.0	23.5	76.80			
4 49 10 p. m.	18.25	24.75	25.25	17,370	1,583	52.0	23.25	5077.80	22.5	22.0				
5 19 10 p. m.	-	-	-	18,936	1,566	62.7	-	-	-	-	83.00			

Distance run by chart	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E. S. E.
Distance run by patent log	-	-	-	-	-	-	89.5	-	-	-	-	-	-	-	3 to 4.
Distance run by engine counter	-	-	-	-	-	-	74.	-	-	-	-	-	-	-	Smooth.
	-	-	-	-	-	-	83.	-	-	-	-	-	-	-	None.

* One fire was cleaned, and it was found that steam would be better kept up without cleaning fires for six hours.

SIX HOURS' TRIAL OF “BELLEROPHON.”

REPORT of Mr. *Steil*, Inspecting Officer of Steam Department.

Sir,

Admiralty, 4 May 1868.

I BEG leave to report that the “Bellerophon” was tried at sea, on the 2nd instant, at full power for six consecutive hours, at a draught of water of 21 feet 11 inches forward, and 26 feet 8 inches aft.

The steam was maintained during the whole period at the blowing off point, and the engines and boilers worked in a satisfactory manner. After being about 20 minutes at full speed, or during the first half-hour's registering, the expansion valve of the forward engine dropped into gear, thus reducing the revolutions, for about six minutes, from 73 to 64 per minute, and causing the total number, for the first half-hour, to be somewhat less than for any of the succeeding half-hour intervals.

During the fourth half-hour the indicator gear of the forward engine broke; no cards could, therefore, be taken from that engine after the accident happened, but as the steam was maintained so regularly throughout the trial, those taken during the first two hours will represent very fairly what was being done by that engine.

The steam pressure, vacuum in condensers, revolutions by counter, and two sets of indicator cards, were taken every half-hour; as shown by the accompanying tabulated statement herewith enclosed, the indicated power there given was obtained from one set of the figures taken, this must, therefore, be considered as an approximation of the power developed; when the other set of figures is calculated, the power will, probably, differ somewhat from this.

The patent log for the six hours gave 81 knots as the distance run in that time, equal to 13·5 per hour; the chart gave about 90, but the influence of the tides in this case will have to be taken into consideration.

On the measured mile trial of the 25th April last, the mean speed of the ship per hour, for six runs, was 13·874 knots, this speed was obtained with a mean number of 72·92 revolutions per minute; now, as the water was smooth and the weather very fine on the 2nd instant, and similar to what it was on the 25th of April, I consider a very near approximation of the speed of the ship on the 2nd instant might be arrived at from the mean number of revolutions made per minute on that day, viz., 73·86, and which would give the speed of the ship as follows:—

Revs.		Knots.		Revs.		Knots.
72·92	:	13·874	- : -	73·86	:	14·05

I have, &c.

(signed) *Jas. Steil.*

Periods.	Steam Pressure.		Vacuum.		Revolutions of Engines.		Pressure on Piston.	Indicated Power.	Temperature of Steam.
	Boiler.	Engine Room.	Forward.	Aft.	By Counter.	Per Minute.			
Half Hours.	Lbs.	Lbs.	Inches.	Inches.	No.	No.	Lbs.	Horses.	Near Cylinders.
1st -	30·	27·	25·	26·	2132·	71·06	20·07	5902·28	270·°
2nd -	30·5	27·5	25·25	25·25	2208·	73·60	20·45	6229·	271·°
3rd -	30·5	27·5	25·	25·5	2208·	73·60	20·55	6259·46	272·°
4th -	30·5	27·5	24·75	24·	2221·	74·03	20·85	6389·44	278·°
5th -	30·5	27·5	24·75	24·	2236·	74·53	20·50	6383·74	290·°
6th -	30·	27·	25·	24·75	2231·	74·36	20·55	6324·10	278·°
7th -	30·5	27·5	25·	25·	2219·	73·96	20·30	6213·52	272·°
8th -	30·	27·	25·	25·	2234·	74·46	20·40	6286·38	276·°
9th -	29·5	26·5	25·	24·5	2227·	74·23	20·00	6138·00	280·°
10th -	29·5	26·5	24·5	24·5	2219·	73·96	20·60	6305·38	279·°
11th -	30·	27·	24·5	24·5	2224·	74·13	19·25	5893·58	270·°
12th -	30·	27·	24·5	24·5	2232·	74·40	19·70	6065·79	278·°
Mean -	30·1	27·1	24·93	24·81	2215·9	73·86	20·268	6199·22	276·16°

"BELLEROPHON."

PORTSMOUTH YARD, 5th May 1868.

REPORT of TRIAL of Her Majesty's Steam Vessel "BELLEROPHON."

										FULL POWER.
When tried	-	-	-	-	-	-	-	-	-	2nd May 1868.
Where tried	-	-	-	-	-	-	-	-	-	From "Warner" towards St. Alban's Head, and back.
Nominal horse-power	-	-	-	-	-	-	-	-	-	1,000 horse-power.
Maker's name	-	-	-	-	-	-	-	-	-	Messrs. J. Penn & Son.
Draught of water	-	-	{	Forward	-	-	-	-	-	21 feet 11 inches.
				Aft	-	-	-	-	-	26 feet 8 inches.
Load on safety valve	-	-	-	-	-	-	-	-	-	30 lbs.
Pressure of steam in boilers	-	-	-	-	-	-	-	-	-	30.04 lbs.
Vacuum in condensers	-	-	{	Forward	-	-	-	-	-	24.85 inches.
				Aft	-	-	-	-	-	24.79 inches.
Number of revolutions of engines	-	-	{	Maximum	-	-	-	-	-	74.53; 4,467 per hour.
				Mean	-	-	-	-	-	73.86; 26,591 in the 6 hours.
Mean pressure in cylinders	-	-	-	-	-	-	-	-	-	20.658 lbs.
Indicated horse-power	-	-	-	-	-	-	-	-	-	6314.61 horse-power.
Speed of vessel	-	-	-	-	-	-	-	-	-	13.720 knots.
Time under way	-	-	-	-	-	-	-	-	-	6 hours 50 minutes.
Time at full speed without stopping	-	-	-	-	-	-	-	-	-	6 hours 35 minutes; 6 hours the time of trial.
Weather barometer	-	-	-	-	-	-	-	-	-	30.354 inches.
Wind	-	-	{	Force	-	-	-	-	-	3 to 4.
				Direction	-	-	-	-	-	S. E.
State of the sea	-	-	-	-	-	-	-	-	-	Smooth.
State of the masts, yards, &c.	-	-	-	-	-	-	-	-	-	Complete.
Quantity of coal on board	-	-	-	-	-	-	-	-	-	499½, including 111 tons of trial coal.*
Quantity of stores	-	-	-	-	-	-	-	-	-	6 months, and 3 months provisions.
Armament	-	-	-	-	-	-	-	-	-	Incomplete - { 45 tons of iron ballast in lieu of shells, and five tons in lieu of a gun carriage.
Propeller	-	-	{	Description	-	-	-	-	-	Griffiths' variable pitch, varying from 18 feet to 22 feet.
				Diameter	-	-	-	-	-	23 feet 6 inches.
				Pitch	-	-	-	-	-	20 feet 1 inch.
				Length	-	-	-	-	-	2 feet 7 inches.
				Immersion of upper edge	-	-	-	-	-	2 feet 4 inches.
Condition of distilling apparatus	-	-	-	-	-	-	-	-	-	Good.
Condition of engine-room telegraph	-	-	-	-	-	-	-	-	-	Completely out of order. Gisborne's electric.
Engines stopped from time of moving telegraph	-	-	-	-	-	-	-	-	-	Not tried.
Engines started ahead	-	-	-	ditto	-	-	-	-	-	"
Engines started astern	-	-	-	ditto	-	-	-	-	-	"

* Nixon's navigation were used throughout the trial, and 62 tons 14 cwt. were burnt during the 6 hours; 78 tons were burnt during the day.

REPORT of Trial of Her Majesty's Steam Vessel “Bellerophon”—*continued.*

TEMPERATURES, &c.

When taken.	On Deck.	In Engine Room	In Forward Stokehole.			In After Stokehole.		
			When taken, 11 15 a.m.	2 15 p.m.	5 15 p.m.	11 15 a.m.	2 15 p.m.	5 15 p.m.
11 15 a.m.	57°	Starboard 73	Fore part - 80 Middle - 120	88	84	92	96	106
		Port - 82						
2 15 p.m.	69°	Starboard 86	After part - 118	126	116	128	128	90
		Port - 94						
5 15 p.m.	56°	Starboard 82	Fore part.					
		Port - 88	Middle.					
			After part.					

Number of Hours.	Revolutions of Engines per Hour.	Mean Observed Time.	Speed due to Time.	1st Mean Speeds.	2nd Mean Speeds.
		H. M. S. From 11 12 25 a.m. to 12 12 25 p.m.			<i>Knots.</i>
Full Power.	1	4340			1. Distance run by chart - - 89·7
	2	4429	1 12 25 p.m.		
	3	4467	2 12 25 p.m.		2. { Distance due to revolutions, as shown at the measured mile trial, thus : 323· = 1 knot - } 82·33 *
	4	4453	3 12 25 p.m.		3. Distance run by patent log - 81·1
	5	4446	4 12 25 p.m.		4. { Distance, after deducting pilot's allowance for tide - - - } 84·7
	6	4456	5 12 25 p.m.		
	4431·83	Mean.			

* An error occurs in this Report also. The number of revolutions of the engines per mile was, at the measured mile, not 323, but 315·3. The mean revolutions of the engines per minute on the measured-mile trial were 72·92, and the mean time of running the mile was $\frac{60}{13·874} = 4·324$ minutes. Therefore $4·324 \times 72·92 = 315·3$, is the true number of revolutions per mile. If this correction is made, it will be found that the distance due to revolutions is, *not* 82·33, but 84·3 knots, and that the speed per hour was 14·053 knots, as stated in the Paper laid before the House of Commons.

R. S. R.

REMARKS as to Performance of Vessel, Engines, Boilers, &c. :

The engines and boilers worked in a satisfactory manner, and the machinery is in all respects fit for service at sea. The steam was maintained at blowing-off point throughout the trial. The ship had been out of dock 21 days.

William Ch. Chamberlain,
Captain of Steam Reserve.

G. Murdoch,
Chief Inspector of Machinery Afloat.

Wm. H. Steil,
For Chief Engineer of Dockyard.

REPLIES of Mr. Lloyd.

11 June 1868.

WITH reference to the Controller's questions respecting the method of calculating the speed of the ship on the six hours trials of the “Bellerophon,” “Minotaur,” and “Warrior,” I beg leave to refer to the following remarks:—

Controller's Questions.

1. Whether the statements in the reports of the six hours trials of the speed due to the revolutions in each of the three ships are arithmetically correct, on the assumption that the speed due to the revolutions, as recorded in the six hours trial, is the same as the speed due to the revolutions at the previous measured mile trial of each ship?

The statements in the reports are not arithmetically correct, as will be seen from the following Table:—

		Speed due to Revolutions as given by the Portsmouth Officers.	Speed due to Revolutions as calculated in this Office.
		<i>Knots.</i>	<i>Knots.</i>
Bellerophon	-	13·72	14·053
Minotaur	-	13·913	14·165
Warrior	-	13·807	13·936

2. Assuming this latter proposition, what would be the speed due to each ship, at the six hours trials, calculated from the revolutions?

As given in the second column of the above Table, viz.:—

Bellerophon	-	-	14·053
Minotaur	-	-	14·165
Warrior	-	-	13·936

These speeds have been inserted in the Tables of the calculated results of the trials of ships.

3. Do the small variations (in the number of revolutions and horse-power indicated) between the measured mile trials of these three ships indicate that any serious differences can exist between the slip, due to a revolution at the measured mile trial, and the slip due to a revolution at the six hours trial?

The circumstances under which the measured mile trials, and the six hours trials of these three ships were made were so nearly alike, that no serious difference can I think exist.

4. Can the speed, due to the assumption that the “slips” were alike on the measured mile and six hours trials, be considered as near an approximation to truth as the distance by chart, by patent log, and that assumed as corrected for tides?

I think that the speed due to the assumption that the “slips” were alike in the measured mile and six hours trials, may be taken as a nearer approximation to the truth than the speed obtained from either of the other methods referred to.

I know no way more correct, when there is no great difference between the number of revolutions, for obtaining the speed of a ship at a six hours trial than that adopted by the Controller, namely, to assume the slip of the screw and the speed of the ship to vary as the number of revolutions of the engines.

(signed) T. Lloyd.

NAVY (THE "WARRIOR," &c.)

COPY of the REPORTS of the OFFICERS conducting the TRIALS of SPEEDS of the "WARRIOR," "MINOTAURO," and "BELLEPHON," referred to in the REPORT of the CONTROLLER of the 11th May 1868.

(*Mr. Seely.*)

*Ordered, by The House of Commons, to be Printed,
16 June 1868.*
